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FURTHER OBSERVATION ON THE TREATMENT OF THE ABDOMINAL VISCERA THROUGH THE COLON.*

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In a paper on this subject, before the AMERICAN MEDICAL ASSOCIATION, in June, 1899, I presented a summary of experiments on animals demonstrating the physiologic results of certain methods of treatment applied to the colon.[1] It was there shown that the introduction of small quantities of water at a temperature of 55 C.—131 F.—through the rectum into the colon produced marked effect not only on the abdominal organs but also on the heart and general circulation. These experiments and the results of clinical observation along lines indicated by them demonstrate, in a variety of cases, the great value of the procedure. In connection with these experiments and resultant clinical data, the present communication proposes to discuss other methods of colonic therapeusis original with myself.

In the first of these new methods, air—hot or cold—is forced into the colon through a double tube, and allowed to escape. This hot or cold air, through its stimulant power, produces what has been well styled gymnastics of the colon. By a second method colon massage is obtained. By a third colonic electrization is secured. Through a fourth method direct medication of the colon is applied. A fifth secures dietetic and other therapeusis through the colon.

As an introduction to the clinical evidence of the value of hot water lavage of the colon, a résumé of the technique seems necessary. The patient is placed in a dorsal position on a table so adjusted that the hips may be raised or lowered to any required angle without discomfort. The solution employed is usually a .9 per cent. salt solution at a temperature of 55 C.—131 F. This temperature is employed to secure the therapeutic effect of heat. A soft-rubber tube, either single or double, with end and side openings, is introduced into the rectum as far as the sigmoid flexure; 200 to 300 c.c. of water at a temperature of 50 C.—122 F.—is first introduced into the rectum. This is allowed to return through the tube into a receptacle, in order to prevent overdistention and to replace the water that has been lowered in temperature in the intestine. The procedure is then repeated and with each repetition the temperature is gradually raised until 55 C. is attained. For this purpose from three to six liters of water will be required. At no time is a large amount to be introduced into the intestine. The patient is then allowed to empty the bowels. After this he is placed on the table and receives a similar short treatment with water cooled to 2 to 5 C. —35.6 to 41 F.—by means of ice. The quantity of water required and the duration of the treatment will depend on the character of the case.

Therapeusis here as elsewhere will depend on correct diagnosis not only of the disorder but of its type. Based on this, the procedure is eminently valuable. For continuous irrigation a double in lieu of a single tube should be used. The double recurrent tube or "needle douche" which I have described elsewhere has answered this purpose well in my hands and in those of Herschel, Treves, Gillespie and other gastro-enterologists.

Favorable results from the procedure thus described depend not so much on the amount of water introduced as on the reaction between the stimulation of heat and that of cold. A single large quantity of water is detrimental, while small quantities of hot water frequently repeated have remarkably beneficial effects. The colon mucous membrane, like that of the back of the throat and esophagus, will sustain a remarkable degree of heat without undesirable reaction.

The therapeutic indications are based on the vasomotor conditions which underlie certain pathologic disturbances. In a general way the cases which are benefited by this procedure may be divided into those where the liver is most markedly affected, those where the kidneys are, and finally those where an intestinal factor is most evident, as in appendicitis. In hepatic insufficiency, catarrhal jaundice, chronic hepatitis, the results of the treatment have been exceedingly satisfactory.

CASE 1.—J. B. M., a miller, 54 years old, complained of pain in "the pit of the stomach" and right side with a feeling of distress and of dull heaviness. In three months he had lost thirty pounds, but had been well up to three months prior to the first attack. He had often been obliged to go without breakfast, and had neglected to take lunches, and returning home ravenously hungry he had often eaten too much at one meal. He had also neglected exercise. Three months of this mode of living resulted in the symptoms described, together with slight icterus. Partial recovery occurred, but he was unable to attend to business and a month later a second attack occurred, followed as before by recovery, but with a longer interval than after the first attack. Three months after the first attack there was pain, icterus with clay-colored stools, and complete loss of appetite. He had been treated by all the usual hepatic medicinals as well as cold water enemata, but grew worse. I was called in consultation and the patient placed under my care. On careful examination it was found that glandular gastroduodenitis existed. The liver was enlarged and hardened but not nodulated. The stools were light in color and the urine contained bile. The patient was placed under colonic lavage with water at 55 C., a normal salt solution being employed. In three weeks the symptoms had entirely disappeared and he had gained fifteen

*Read at the meeting of the Mississippi Valley Medical Association, Chicago, Oct. 3, 1899.

[1] Turck: Treatment of Abdominal Viscera through the Colon. THE JOURNAL, xxxiii, 580.

pounds. Six months later there had been a complete recovery with a gain of thirty pounds in weight.

CASE 2.—Dr. W. R. F., aged 44 years, complained of pain in the region of the liver, loss of appetite and of weight. There was dizziness and ringing in the ears, as well as of depression. The skin was discolored at times, and he had frequent attacks of what had been diagnosed as cholemia. He had been under the usual treatment, medicinally, for this condition for six months. On examination there was found an increased hepatic area in the cardiac direction, reaching to the mammary line.

The urine did not contain albumin, sugar nor bile; 700 c.c. were passed in twenty-four hours; the urea was 1.87, the specific gravity 10.25. The diagnosis was hepatic hyperemia with resultant insufficiency. During one month he was treated with colonic lavage at 55 C., eighteen times. The symptoms all disappeared, the liver diminished in size, the urine was increased in quantity and contained an increased amount of urea, the appetite returned, the patient resumed practice and has continued well.

In the following case diabetes, evidently of hepatic origin, co-existed with hepatic insufficiency.

CASE 3.—A 59-year-old man complained of pain in the hepatic area, of belching gas and of disturbances of digestion one hour after meals. He was markedly depressed. On examination the liver area was found within normal limits, but on pressure was hard and resistant. The heart sounds were weak; the second sound at the base was accentuated. The gastric area reached 2 cm. below the umbilicus. On examination of the stomach contents there was found retention of food but no free HCl. The patient had been on strict anti-diabetic diet, and had visited Carlsbad several times with slight improvement. On return to the United States the symptoms reappeared. He was placed on a mixed diet, care being taken to select such food as was nutritious and was easily digested. There was a slight restriction in the carbohydrates. Colonic lavage was begun with normal salt solution at 55 C.

The treatment was continued every other day for two months. During the third month it was given twice weekly, after which the patient took only occasional treatment. When indicated, intragastric medication was given. The principal treatment, however, was colonic lavage. As a result all the symptoms disappeared, the bowels became regular, the urea returned to normal limits and the glycosuria disappeared. The patient has had no treatment for several months and has remained well. No sugar is detectable in the urine.

CASE 4.—E. H. L., a man 36 years old, complained of dizziness and depression which prevented him from attending to business. He was markedly constipated, had used alcoholics steadily for years and often to excess, and the skin was discolored, the heart area enlarged, but the valves intact. The liver area was enlarged and the liver was hard and resistant. On examination of the stomach contents, one hour after the Ewald test-meal, there was found: total acidity 45, free HCl .05 per cent. Seven hours after a regular meal the stomach was empty and mucus was present. The stomach was thick and not distensible, the gastric area normal. The diagnosis of hepatic cirrhosis was made. Colonic lavage—55 C.—was given daily for one week, then every other day for three weeks, then twice a week for the next month and once a week for the following three. The principal symptoms disappeared in one month; there was gradual improvement in the general condition. The patient now attends to business and claims to be as well as ever.

Renal insufficiency, with or without albuminuria is frequent in many chronic cases, and these often present more or less complete evidences of the symptom-complex, uremia. In such cases colonic lavage gives brilliant results. Even in true nephritis the condition is much improved, and clinically the disorder seems to have disappeared. The following cases illustrate the prompt result and lasting benefit of this treatment:

CASE 5.—A 58-year-old woman suffered from acute renal congestion with suppression of urine. There were ominous symptoms of uremia, great depression and nervousness and headache. Her throat was markedly inflamed. During the first twenty-four hours no urine was passed, but during the second twenty-four 100 c.c., after which the quantity reached 300 c.c.; albumin +, urea —. The usual medicinal treatment had had but slight effect. When I was consulted colonic lavage—55 C.—was ordered every hour for three or four, after which it was given every three hours. Under this treatment the urine greatly increased in quantity and the albumin diminished. The treatment was continued twice daily until recovery.

CASE 6.—A 45-year-old man had suffered from chronic nephritis and there was albuminuria with granular casts, with nausea and vomiting daily, headache and marked loss in weight. On examination of the eyes Dr. Casey A. Wood found an atypical albuminuric retinitis in the right one. He passed 500 c.c. of urine daily, containing 12.5 grams of urea, albumin and casts. After treatment by colonic lavage, the urine increased to 700 c.c.; the specific gravity was 1025. The test for albumin gave negative results, although there was albumosis. The urea had increased to 22.36 grams. The vomiting ceased. The treatment was continued at a regular interval for three months. The weight increased 18 pounds. The urine became free from albumin and casts and the amount excreted was within normal limits. One year afterward the patient remained in healthy condition and no albumin nor casts were to be detected.

During the past six years I have found colonic lavage with alternate hot and cold water useful in the early stages of appendicitis. In some cases where diagnosis can not be made at once, a waiting course is adopted. In such and in any event employment of the alternate hot and cold colonic lavage has given good results, since even where operation is indicated the danger of shock is lessened. The treatment, moreover, does not mask but accentuates the cardinal symptoms. The pain is lessened, the shock reduced, the circulation markedly improved, the temperature lowered, the gaseous distention reduced, the abdomen relaxed and rendered less painful to the touch. It thus becomes possible to make more thorough physical examination. In the following three cases the symptoms subsided within twenty-four hours. Operation had been refused in each case. As soon as adhesions are formed, colonic treatment should be used, if at all, very cautiously.

CASE 7.—Mrs. J. W., wife of a physician, had an acute pain in the right iliac region, with vomiting and shock and a temperature of 102 F. The bowels moved slightly after enema. On examination pelvic disease could be excluded. There was great tenderness on pressure over McBurney's point. The matter vomited consisted of duodenal contents. Continuous colonic lavage was given for thirty-five minutes, and this was repeated two hours afterward. The bowels moved, the temperature fell—100.5 F.—the vomiting ceased and the pain lessened. The patient was then removed to the Post-Graduate Ho-

pital and colonic lavage at 55 C. continued. On consultation with Dr. A. H. Ferguson, the diagnosis was confirmed and the patient prepared for operation. On account of the rapid improvement in the symptoms it was, however, decided to wait and continue treatment by colonic lavage. She made an uneventful recovery, without operation.

CASE 8.—A 16-year-old girl suffered from acute appendicitis, but operation had been refused. I was called in consultation and found her very weak, vomiting constantly and suffering from great pain with a temperature of 102 F. There was a diffused maximum tenderness over the right iliac region. Colonic lavage was undertaken at once. On account of great weakness care was taken to avoid overstimulation. Small quantities of water were used at short intervals; the temperature was gradually raised to 55 C. The pain gradually lessened and the temperature fell. Colonic feeding was instituted and no attempt made to feed by the mouth. Colonic lavage was continued twice daily, and she improved rapidly and made a good recovery. Consent to operation was obtained six weeks after recovery from the attack, the appendix removed and the patient made a complete recovery.

CASE 9.—Dr. H. E. P., aged 55, came under observation with a second attack of appendicitis, with great pain and vomiting. The temperature was 104 F. Preparations had been made for operation, which was refused. Colonic lavage at 55 C. was begun. Immediately after, the patient fell asleep. On awakening two hours thereafter colonic lavage was again given and a third treatment was given at night. The pain was much lessened, the shock was reduced and the temperature fell to 102 F. The treatment was continued next morning, noon and night. The temperature fell to 100 F., the pain ceased and the general condition was much improved. He made a good recovery and has remained well since.

Continuous irrigation produces effects slightly different from those of colonic lavage, and is indicated in impaction, acute gastro-enteritis and in the early stages of appendicitis. Rectal enemata have been used in appendicitis, but their effects have been more or less marred by deficiencies resultant on the technique employed. The *modus operandi* of colonic lavage and continuous irrigation is much more complex therefore than would at first be assumed. They not only affect that of the bowels but also the general abdominal circulation. This effect is produced through their influence on the plexuses of the intestinal walls and on the ano-genital center. This center is one of the last reflexes to be extinguished during coma of any kind, and hence what affects it has a powerful influence on the abdominal and pelvic organs and on the central nervous system. This center has the widely diffused action which results in the influence of therapeutic and pathologic procedures on the hepatic, renal and general circulation. The temperature as well as the mechanical influence of the procedures described plays a part in therapeutic results through their influence directly on nerve plexuses.

For several years, being convinced of its value by a lengthy experience I have advocated the employment of colonic lavage in typhoid fever. There is no danger resultant on the introduction of small quantities of water at a time, being allowed to siphon off before introducing more. There might be harm from using large enemas, by what is known as "high injections," "rectal and colonic flushings," etc. These methods may be of more advantage used as a douche. There have been advocates of the use of large enemas of water in typhoid fever. The procedure has been warmly advocated by Schnell and Henselä[2]—Meseritz. These methods have been found to be especially of value in the early stages of typhoid fever. Despite the glowing eulogisms which this procedure has received, the introduction of large enemata (stretching the rectum and sigmoid flexure) has produced great weakening. This is not surprising when the fatigue attendant on the effort to expel from two to four pounds weight of water is remembered. With precautions with the technique already described, and with variations in temperature and time of treatment suited to each case, the rain or needle douche procedure will have decidedly potent effect in removing from the colon the toxin and contagious materials and in restoring the circulation. While it can not be definitely stated that duration of the disease is shortened, still there is such an improvement in the lassitude, delirium, pyrexia, and other constitutional expressions of typhoid fever, and such a lessening of complications, that the value of the procedure is demonstrable to any one employing it. After a careful practical study of the methods in vogue during the past decade I consider this method of colonic lavage of most value. The treatment is contraindicated in cases where dilated heart or other grave cardiac lesions exist. In severe proctitis and sigmoiditis very hot water sometimes acts as an irritant to the intestinal walls. Here water at the room temperature is preferable. Except in acute diseases—for the immediate physiologic action indicated even then only if there be proctitis—damage will not result unless the treatment be continued too long. In cases of marked arteriofibrosis, when danger from hemorrhage may result from the employment of any active procedure, lavage is contraindicated, as also in advanced tuberculosis, as well as in cirrhosis in which the conditions of the vessels may produce hemorrhage on slight strain. These contraindications are such as will occur in individual patients rather than in particular types of disease. They are therefore such as must be formulated by physicians as to the therapeusis of any patient.

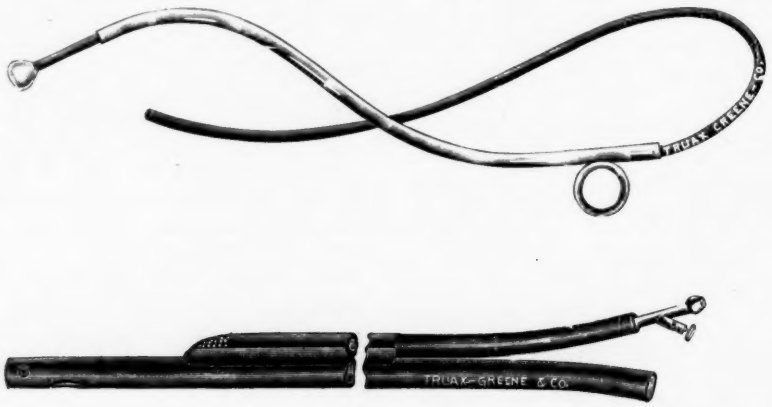
In the treatment of the colon by water or air, single or double recurrent tubes are employed, according to the object to be obtained. One with but one opening at the end is useless for colonic lavage. The tube I have devised for this purpose has a caliber of 23 A. or 35 F., and is one meter long. The end is tapered and the edges of the opening are beveled. On either side of the tube is a row of four small openings; above is a large side opening with sunken eyes, to prevent irritation in introduction of the tubes. The distance from the end of the tube to the end of the uppermost opening is 1¾ inches. The advantages of the tube are: The rapid and immediate return of the water injected, the absence of danger of trauma of the mucous membrane by siphonage, and a more equable distribution of the water, a matter of importance in the introduction of food or in local medications as well as in lavage. The double recurrent tube and "needle douche," which has been previously described by me, is indispensable when prolonged irritation or lavage is needed. It is of value, as has been pointed out by Treves, Herschell, and Gillespie, in impaction as well as in obstruction from any cause. It is also useful in appendicitis. The sprinkler at the end of the tube is of value in atony of the colon and wherever hot or cold water is indicated as a spray, "needle" douche, single or alternating. The "needle" or "rain" douche or "sprinkler" has been employed for many years, in the treatment

[2] N.Y. Med. Jour., Sept. 2, 1893; Allgemeine Med.-Zeitung, 1896.

of gastric and intestinal disorders. Up to 1894, when I first presented this procedure to the profession, no proper method suited to emergencies and destitute of disadvantages when carefully employed was in use for douching the stomach and intestines. There was a method which employed a single tube with a large opening and several smaller openings which was denominated a "stomach douche." The disadvantages and lack of efficiency of this procedure have already been pointed out.

The "needle" or "rain" douche admits of being turned into an electrode by introduction of a gyromele cable, thus producing a combined recurrent rain douche, with electric addition. This procedure has been employed by me for years with benefit, in the treatment of the stomach.

It will often be found difficult to pass the sigmoid flexure, when this becomes necessary, with the ordinary rubber tube, as it is not adapted to this purpose. The passage around the colon, even as far as the cecum, is now practicable with my colonic sound and irrigator. This consists of a double curved metallic tube about sixteen inches in length, of such design and construction that it may be passed through the sigmoid flexure. The tube not only serves for the return flow of fluids injected into the colon, but also as a sheath for the introduction of a flexible, hollow metallic cable, which is a portion of the instrument. This cable, at its distal end, has a perforated olive-shaped head which serves as a guide for passing the sound. The cable is hollow and may be employed for colonic distention. If this be done during the passage of the sound, the further introduction of the latter is assisted. The position of the cable tip can be determined by palpation, especially if the cable be rotated. The latter can also be employed as an electrode when necessary, and is of value as an adjuvant in both medicinal and dietetic treatment of the colon.



A frequent personal idiosyncrasy prevents introduction of water, especially hot water, into the colon. Its introduction is sometimes followed by collapse. The general atony of the bowel resultant on the enema habit is a comparatively minor though unpleasant expression of this condition.

In treatment of the colon, especially when atony exists, the objects are: application of heat, distension with resultant contraction and peristalsis, the last acting as a gymnastic exercise of the colon. To avoid the untoward effects of water, air may be employed. If needed the air can be heated by the methods described at the last session of the British Medical Association.[3] Compressed air is introduced through a double tube into the colon. When the latter is distended, the air is permitted to escape through the outlet tube. Air heated to 55 C. reaches as far as the cecum. The air can, at need, be so medicated with menthol, clove-oil, etc., as to apply the method of nebulization to the bowel. The chief value of this is relief of atony through stimulation, with resultant benefit thereby to constipation consequent on the atony.

Like all other organs of the body, the intestine has its own system of nerves responsive to peripheral influences from its contents. These, as Langley has lately shown, react differently and independently from the general system of peripheral nerves. They require local stimulation as well as systemic in cases of atony. Hence abdominal massage can not fulfil all the claims made for it in this particular. To act on these nerves the bowel requires massage from the mucous surface. This is best accomplished by the gyromele or revolving sound adapted to this purpose. Through the cable of the gyromele electricity may be added to vibratile massage. The flexible cable with the sponge attached is easily slipped into the bowels. The cable and sponge are rotated by a small drill. The cable can be readily turned into an electrode, placing the indifferent electrode on the abdomen. According to Herschell (Constipation, 2d Ed., 1899) this gyromele can not injure the bowel, nor is it necessary to inject previously with water. Well wetted and soaked, the sponge easily passes the sphincter and is readily pushed as far as the sigmoid flexure.

My conclusions are: Massage, systemic or abdominal electrization, while not destitute of good effects, achieve but partial success. The facts already cited as to the benefit of massage applied to the bowel's mucous membrane are peculiarly applicable to electrization, which can be applied to the mucous membrane of the bowel, as far as the colon is concerned. A large area can be reached through the cable and irrigator by the method already described.

Space does not permit the report of experiments, and observations on medical and dietetic treatment through the colon. These are reserved for a future communication.

[3] Turck: Pneumatic Gymnastics, etc. British Med. Jour., No. 1974, p. 1328.

THE PARIS millionaire philanthropist, Osiris, is building for his friend and physician, Paul Segond, a gynecologic pavilion in the gardens of the Salpêtrière Hospital. The *Figaro* describes it as presenting the appearance of a beautiful country villa, the abode of peace and happiness. It will undoubtedly be a model in every respect.

PROTOCOLS OF MICROSCOPIC EXAMINATION OF SEVERAL GASSERIAN GANGLIA.*

BY LEWELLYS F. BARKER, M.B.

BALTIMORE, MD.

(Continued from page 1041.)

1. *Control from Autopsy 1466: Ganglion semilunare sinistrum.* (From a man 39 years old, dead of chronic interstitial nephritis, arteriosclerosis, fibrous myocarditis and miliary tuberculosis of both lungs, with right-sided fibrinous pleurisy. No disease of the ganglion was suspected.) Formalin hardening and paraffin embedding were used and serial sections stained by various methods. Nerve-cells are present in normal numbers, the cells larger than the average, generally rounded or oval in shape, and they fill up the capsular spaces. In many of the sections there is a distinct group-like arrangement, several cells being closely crowded together. In some of these groups no capsular cells can be made out around the individual members of the group. The nuclei of the cells are as a rule centrally placed. The nucleoli are large and deeply staining; the nucleus itself is often fusiform or spindle-shaped, sometimes round, the alteration in shape being probably due to the fixation. The nucleus in Nissl preparations stains of a light blue tint. Tigroid is abundant in the cell protoplasm, chiefly in the form of rather minute masses. Some of the cells contain large masses of yellowish so-called "pigment substance" quite like that seen in the ventral horn cells of the spinal cord. Rather more of the cells show a brownish black, or almost black, pigmentation, this black pigment being arranged sometimes at the poles of the cell, sometimes in the form of a circle around the nucleus, sometimes in crescentic masses in the cell body. The cells vary in size and shape, large ones predominating. In a few cells the tigroid is scanty about the nucleus, but in the majority it is very evenly distributed throughout the cell body. A number of concentric bodies the size of nerve-cells and some larger, some smaller, are present. They are situated sometimes close to small nerve-cells, apparently crowding them. There is no change in the appearance of the capsular cells. They are not numerous and are for the most part flat and long-drawn out. The connective-tissue about the ganglion shows no alterations. The blood-vessels are not thickened.

2. *Control from Autopsy 1476: Ganglion semilunare dextrum.* (From a colored woman aged 65, dead of epithelioma with multiple visceral metastases. No disease of the ganglion was suspected.) The nerve-cells vary somewhat in size, but on the whole are tolerably uniform. They are distributed evenly in parts of the ganglion, in other parts they are arranged in definite longitudinal strands of from four to seven cells wide. The cells fill up the capsular spaces. The group-like arrangement met with in the ganglia of Autopsy 1466 is not seen here. The nuclei are nearly all centrally placed and on the whole stain normally, although the nuclear substance takes a slightly bluish tint in Nissl preparations. A number of the cells contain the black pigment mentioned. Very few contain the yellow pigment. The amount of tigroid varies in different cells, some staining much more deeply than others. The tigroid is chiefly present in the form of fine granules. At the periphery of some of the cells there are large bleb-like vacuoles in the cell protoplasm. There are also clear spaces devoid of tigroid at the edges of some of the cells. These may be identical with the *Vacuolen* of v. Lenhossék and the discs of Huber. The capsule cells are often irregularly arranged in the periphery, being higher and deeper staining at one or both poles of the cell. In a great many of the cells, however, they are flat and regularly arranged. Only occasionally is there a capsular space not filled up by the cell. A few cells are seen in which there is marked retraction of the nerve-cell body, so that it forms a small crescent at one edge of the capsular space, the rest of this space being either empty or partially filled with a fine granular deposit which looks like coagulated albumin. Scattered through the ganglion are a few foci where small round cells have accumulated. These cells are nearly all small mononuclear elements of the lymphoid cell type. The majority of them are in the tissue between nerve-cells, but some of them are found invading the capsule and capsular space of nerve-cells. They may be between the capsule and capsular space of nerve-cells. They may be between the capsular cells and the membrana propria on which these rest; occasionally a garland of them is met with between the nerve-cell body and the capsular cells, and sometimes they are actually within the cell bodies of the capsular cells.

This ganglion contains very few of the concentric pale bodies. The connective tissue around the ganglion is not increased in amount. The walls of the blood-vessels show no marked alterations. Along some of the smaller arteries and veins cut longitudinally there is a distinct increase in the number of cells in the tissues just outside. These cells are typical plasma cells of Unna's type.

3. *Control from Autopsy 1480:* man aged 39 years who died in status epilepticus following chronic traumatic meningitis; chronic nephritis, edema of the lungs.

Ganglion seminlunare dextrum: No disease of the ganglion was suspected. Nerve-cells are present in normal numbers and distribution, nearly all rather small, very few of the large type being present. There are a good many concentric bodies. Some of them are pale, some of them stain deep, dark blue in hematoxylin.

The nuclei are centrally placed. Most of them are round, but some are oval, and a few have jagged edges. The cells are rather pale, the tigroid being scanty. A number of cells show the brownish-black pigmentation; more contain a yellowish pigment. The capsular spaces are uniformly well filled by the nerve-cells. The capsule cells are numerous. An occasional nerve-cell is found far out in the trunk of the nerve. No increase of connective tissue is demonstrable. The blood-vessels are normal. There are no areas of round-cell infiltration or of plasma cell accumulation.

Ganglion semilunare sinistrum: Sections of this ganglion are similar in appearance to those of its fellow of the opposite side.

4. *Gasserian Ganglion from case of cerebrospinal meningitis:* The ganglion and nerves are swollen and bathed in pus. The latter consists chiefly of polymorphonuclear leucocytes, but there are also many small mononuclear leucocytes and a number of larger phagocytic cells containing several of the smaller cells within their protoplasm. The nerve-cells are present in normal numbers. The actual single nerve bundles and masses of ganglion cells are scarcely invaded by the purulent process, the pus lying between the individual nerve bundles and at the periphery of the various ganglion cells and masses. The cells stain intensely in Nissl preparations, and the tigroid is abundant. The capsular spaces are well filled. The nuclei as a rule are centrally placed, and they are distinctly swollen. The nucleoli are present and sometimes swollen; no evidence of general chromatolysis can be made out, the most marked alteration being the extreme swelling of the nucleus. Sometimes the nucleus is so swollen as to fill up most of the cell, leaving a rim of deeply staining protoplasm peripheral to it. In one mass of ganglion cells thus altered, the nuclei are excentrically placed, and in some of the cells the tigroid has almost disappeared. It is probable that the nerve-fibers connected with these cells have been injured in the inflammatory process. The blood in the blood-vessels shows a slight leucocytosis; the walls of the blood-vessels show no demonstrable alterations.

5. *Experiment on a dog's Gasserian ganglion.* (Operation by Dr. H. W. Cushing, with evulsion of the N. maxillaris on the right side): The right and left semilunar ganglion were fixed in alcohol at the end of fifteen days, with paraffin embedding, and staining by Nissl's method. In the ganglion on the right side are rows of ganglion cells chiefly situated in the middle of the ganglion, which show the typical "reaction at a distance;" that is, displacement of the nucleus to the side of the cell with chromatolysis. Where the changes are most in-

*Read in a Symposium on the "Fifth Nerve in its Neurological and Surgical Relations," before the College of Physicians of Philadelphia, April 20, 1900.

tense, nearly all the cells have undergone alteration. At the peripheries of this intense area altered cells are scattered in among healthy cells.

6. *Ganglion semilunare dextrum in case of tic douloureaux.* (Removed by operation, by Dr. H. W. Cushing, Jan. 15, 1900): The ganglion has been removed entire along with the stumps of the N. ophthalmicus, N. maxillaris, N. mandibularis and N. trigeminus. In Marchi preparations of the N. trigeminus a number of the fibers are markedly swollen and show diffuse fine black droplets. Similar changes are found in the N. ophthalmicus and N. maxillaris, though not to so marked a degree. There is, however, no outspoken typical Marchi degeneration in any of the nerves. The nerve-cells in the ganglion do not appear to be diminished in number; the size of the cells varies; there are rather more of the very large ones than normal. A great many of the cells are irregularly retracted into diffusely staining chromophile masses, leaving wide capsular spaces. Some of the cells not contracted are paler than normal, having less tigroid in the Nissl preparations. Still, a good many of the cells appear to have the normal amount of tigroid. The peripheries of the cells are irregular. The nuclei are, as a rule, centrally placed, round and contain normal-looking nucleoli. Yellow pigmented cells are abundant. Black pigmented ones are far less numerous. Concentric bodies are abundant in this ganglion, some of them being very large. The changes in this ganglion are very much less marked than in the next case. There is no increase of connective tissue. No vascular changes are to be made out, and no accumulations of foreign cells in the ganglion. The capsular cells are for the most part low and flat.

7. *Ganglion semilunare sinistrum in case of tic douloureux.* (Removed by operation, by Dr. H. W. Cushing, Jan. 17, 1900. Surgical number, 2907): The ganglion was cut into serial sections, some of them being stained by Nissl's method; others by hematoxylin and eosin, others by Van Gieson's method. The ganglion has been removed *in toto*, but is somewhat lacerated. The nerve-cells are generally normal in size, though some of the cells look swollen. A large number of the cells are irregularly retracted, leaving a wide capsular space, portions of the cell protoplasm sticking out like prongs to the periphery. The cells stain very irregularly; a large proportion of the cells are chromophile in the sense of Nissl, that is to say, they stain, by Nissl's method, a deep, dark blue color so that it is very difficult to make out anything of their internal structure. The nucleus can not always be seen, owing to the dark staining, but sometimes it can be made out and then is usually centrally placed. Throughout the deeply staining blue substance, pale, vacuole-like areas can be made out, and masses of yellow pigment are also present in these chromophile cells. Of the cells which are not chromophile, a large proportion are very pale, almost devoid of tigroid, the little that is present being situated at the peripheries of very small pale areas scattered through the ground substance of the cell body. The nuclei of these cells vary in size and shape; some of the nuclei look swollen; others look contracted. Nucleoli are frequently absent from the cells, although in many they are present and are normal in size and position. In a few the nucleolus is seen outside the nucleus, lodged in the cell protoplasm. In some there has been fragmentation of the nucleus, two and three pieces of the latter remaining side by side in the cell body. The pale cells in hematoxylin and eosin preparations show a delicate net-work-like appearance stained in hematoxylin. Scarcely any normal-looking cells exist. Cells with black pigment and with yellow pigment are present, the latter being more abundant than the former.

There are a few concentric bodies. There is no increase of connective tissues about the ganglion demonstrable. The small blood-vessels in the ganglion are dilated; there is no round-cell infiltration.

OPERATION IN TIC DOULOUREUX.

A few convictions with regard to operative measures in tic douloureux may here find expression:

1. If a ganglion be entirely removed there need be no fear of a return of pain from irritation of the stump of the N. trigeminus left behind, for all of the axons of this stump will degenerate to their terminations in the pons and medulla, down as far as the cervical cord. The end of a nerve in an amputation stump is not analogous.

2. Complete removal of a Gasserian ganglion utterly abolishes the possibility of calling forth sensations in consciousness by applying stimuli to the domain of peripheral distribution of the nerves connected with the ganglion of the corresponding side; retention of sensation on peripheral stimulation after operation indicates incomplete removal.

3. If pain persists, paroxysmally or continuously, after complete removal of the ganglion, or after evulsion of the N. trigeminus from the pons, the ganglion being left *in situ*, a lesion of the central neurons—of the second or of higher orders—of the trigeminal afferent conduction path is indicated.

4. In *tic douloureux* due to disease of the peripheral set of trigeminal sensory neurons, relief should be as complete and permanent by cutting the N. trigeminus between the ganglion and the pons and evulsing the central end without removal of the ganglion, as when the ganglion itself is excised.

PATHOLOGIC REPORT ON TWO OF THE GASSERIAN GANGLIA REMOVED BY DR. CUSHING.*

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PHILADELPHIA.

The first ganglion was received hardened in Müller's fluid. Portions of the three peripheral divisions were cut separately from the ganglion, and were studied in transverse and longitudinal sections. The body of the ganglion was cut in the longitudinal direction, so that the sensory root and the second and third branches were obtained in the same sections and the relations of the parts could be studied. The stains employed were ammonium-carmin, hematoxylin (methods of Weigert and Delafield), acid fuchsin, osmic acid (method of Marchi) and the Rosin stain.

First Division: Weigert's Hematoxylin Method.—In examining a transverse section in which the decolorization has not been pushed very far and the connective tissue is stained a deep brown—a fair test of the degree of decolorization—one is impressed by the relatively few nerve-fibers which stain a deep black. In each nerve bundle many deeply stained nerve-fibers are found, but the majority of them stain gray or brown. The black fibers are naturally more conspicuous than those faintly stained. This imperfect staining is an indication of alteration in the composition of the medullary sheaths by which the normal chemical reaction with hematoxylin is prevented. Not every fiber, even in a normal nerve, stains deeply with hematoxylin, possibly because the medullary sheaths of normal nerve-fibers differ in composition, and degeneration and regeneration are constantly occurring in the same bundle; but such imperfect staining as is seen in this division of the ganglion is probably due to pathologic change. With the Weigert hematoxylin method not much swelling of the medullary sheaths can be detected, although some of the sheaths are swollen. When the decolorization is pushed so that perfect differentiation is obtained, chains of black dots, such as I have described elsewhere,[1] are seen in

*Read in a Symposium on the "Fifth Nerve in its Neurological and Surgical Relations," before the College of Physicians of Philadelphia, April 20, 1900.

transverse sections of the medullary sheaths. This is indicative of disintegration of the myelin. Nerve-fibers do not stain evenly in normal sections, but we do not find such a circle of dots in most fibers in normal sections.

When the ammonium-carmin and Delafield's hematoxylin are employed the axis-cylinders are not colored very deeply. Some of the medullary sheaths are considerably tumefied, but most are of normal size. (Fig. 1.) Occasionally within a tumefied medullary sheath there is a large and irregular pink mass, the remains of an axis-cylinder, but usually the axis-cylinder can not be detected within a swollen medullary sheath. Many nerve bundles seem to be perfectly normal, and the diseased fibers are confined to certain bundles. A much diseased bundle may be found directly in contact with an apparently normal one—possibly there is evidence in this selective tendency of the process for the theory of a cellular origin of the disease. The axis-cyclinders are a little more prominent by the Rosin method, and some are distinctly enlarged.

Fig. 1. Oc. 3; Ob. 7. First division by the carmin stain. Many of the axis cylinders and medullary sheaths are greatly swollen.

In longitudinal sections of the first division the tumefaction of certain of the medullary sheaths is very evident, and the axis-cylinders are frequently found altered. In some fibers a transverse cleavage of the axis-cylinders has occurred, and in others the axis-cylinder is swollen and of irregular shape. (Fig. 2.) The change in these is not as pronounced as in one of Dr. Keen's[2] cases, studied by me. Often the nerve-fiber has a distinctly fusiform shape, and in the enlarged portion the medullary sheath appears very granular.

Second Division: Weigert's Hematoxylin Method.—The nerve-fibers stain more intensely than those in the first division, but in some distinct tumefaction is seen, and the swollen fibers stain in black or light gray or brown, according to the degree of tumefaction, and have rather indistinct outlines when the tumefaction is marked. Some swelling of the medullary sheaths and axis-cylinders is seen by the ammonium-carmin stain. The axis-cylinders possibly take the carmin more deeply than do those of the first division. The blood-vessels do not appear to be greatly altered. The second division, stained by the Marchi method and cut longitudinally, shows a considerable accumulation of black dots in the nerve-fibers. This reaction will be mentioned further on in the description of the body of the ganglion. The tumefaction of medullary sheaths and axis-cylinders is not so evident in longitudinal sections as in those of the first division. In these sections also the vessels appear nearly or entirely normal.

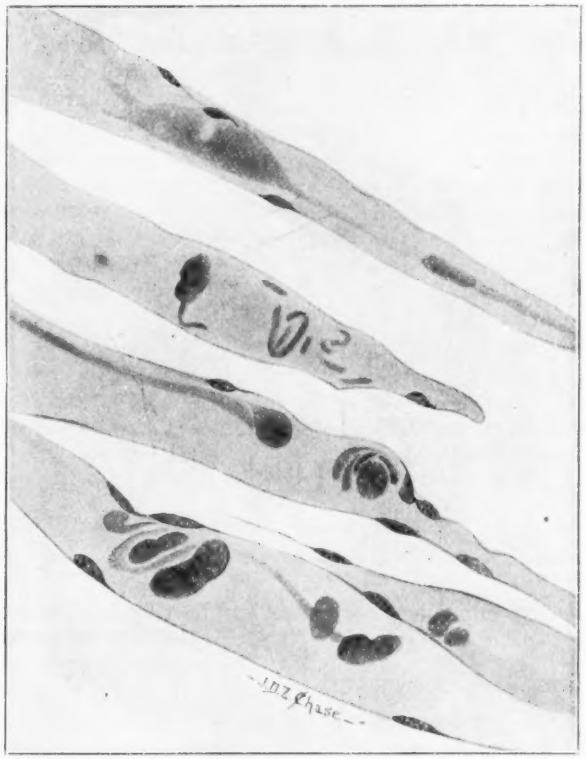

Fig. 2. Oc. 3; Ob. 1-12 immer. Swollen and degenerated axis cylinders within the ganglion (first division).

Third Division.—The description of the second division answers for the third, and in the latter also the tumefaction of certain medullary sheaths is distinct, and these swollen fibers stain gray with Wiegert's hematoxylin method. In the employment of the ammonium-carmin a tumefaction of some medullary sheaths with absence of axis-cylinders is seen, and in other parts distinct swellings of the axis-cylinders is evident.

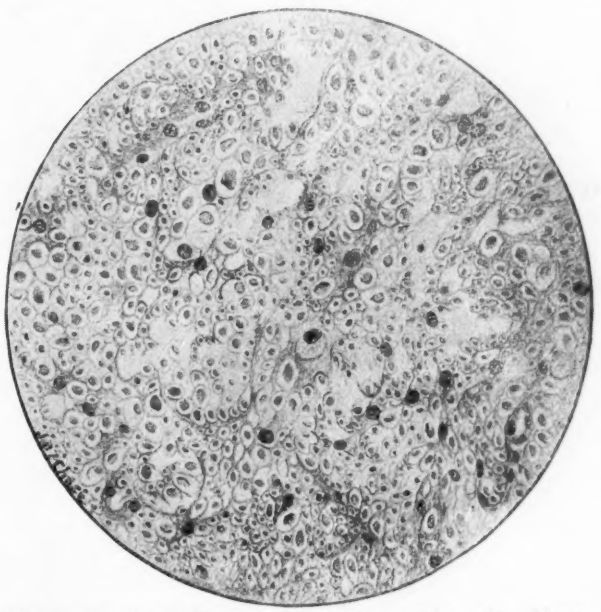

Fig. 3. Oc. 3; Ob. 7. Sensory root by carmin stain. Many of the axis cylinders are swollen. Compare this degenerated portion of the sensory root with the normal portion of the same root shown in Figure 4.

Sensory Root.—Many moderately swollen axis-cylinders are found in transverse sections of the sensory root stained with ammonium-carmin. (Fig. 3.) The tissue shows many open spaces, and as the root macroscopically gave evidences in its torn appearance of having been pulled upon, these breaks in the tissue might be regarded as artefacts. The swollen axis-cylinders are found only in this loose tissue, and the tumefaction of axis-cylinders could hardly be produced by surgical manipulation followed by immediate hardening of the tissue. Some of these spaces resemble those that are found when nerve-fibers have degenerated and dropped out, and this loose tissue may be regarded, in part at least, as the result of a pathologic condition. The swelling of the axis-cylinders is not attended by a proportional swelling of the medullary sheaths.

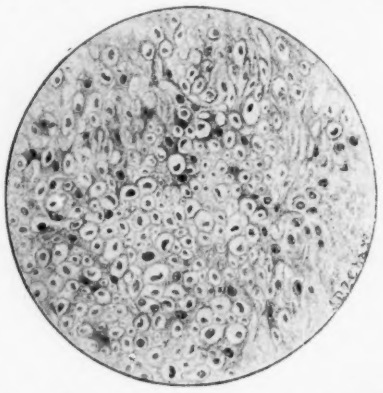

Fig. 4. Oc. 3; Ob. 7. Sensory root, normal portion. This is drawn with the same magnification as is the degenerated portion and should be compared with the latter (Fig. 3). In Figure 4 a smaller portion of the field has been drawn than in Figure 3.

The Ganglion Proper.—A space is seen between most of the ganglion cells and the surrounding capsules, and this is evidently due to the hardening process. Some nerve-cells stain deeply with the carmin, others more faintly—a reaction that is seen in normal tissue. The pigmentation of the cells is not excessive, and in almost every one the nucleus and nucleolus can be seen. The intercellular tissue can hardly be regarded as increased in amount. The vessels are not strikingly abnormal, and the small vessels have delicate walls. Some tumefaction of axis-cylinders and medullary sheaths is seen in certain parts, but the changes within the ganglion, as studied by the carmin stain, are not very intense. The Marchi method gives most interesting results. The medullary sheaths of many of the fibers passing to the peripheral branches show distinct degeneration (Fig. 5), and a similar degeneration is found within the ganglion. The sensory root presents a marked contrast; it is not entirely free from black dots, but black masses are found in normal nervous tissue in moderate amount when the Marchi stain is used. The sensory root does not exhibit the distinct evidence of degeneration seen in the distal end of the ganglion and the interior parts, and yet one might hesitate to say that this root is absolutely normal. (Fig. 6). Numerous concentric bodies—brain sand, concentric concretions, etc.—are found within the ganglion, but I have found these in many of the Gasserian ganglia of man that I have studied, and do not regard them as necessarily indicative of disease of the ganglion. (Fig. 7.) The motor root was not obtained.

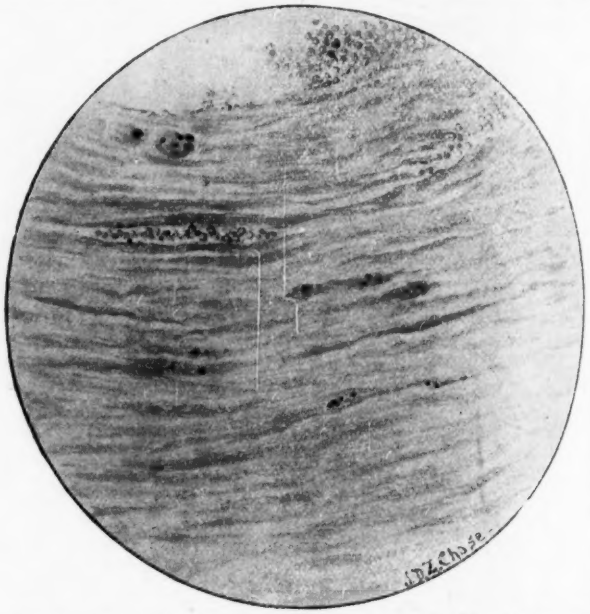

Fig. 6. Oc. 3; Ob. 5. Sensory root, normal, by Marchi's method.

Fig. 5. Oc. 3; Ob. 5. Degenerated nerve fibers within the Gasserian ganglion. Method of Marchi.

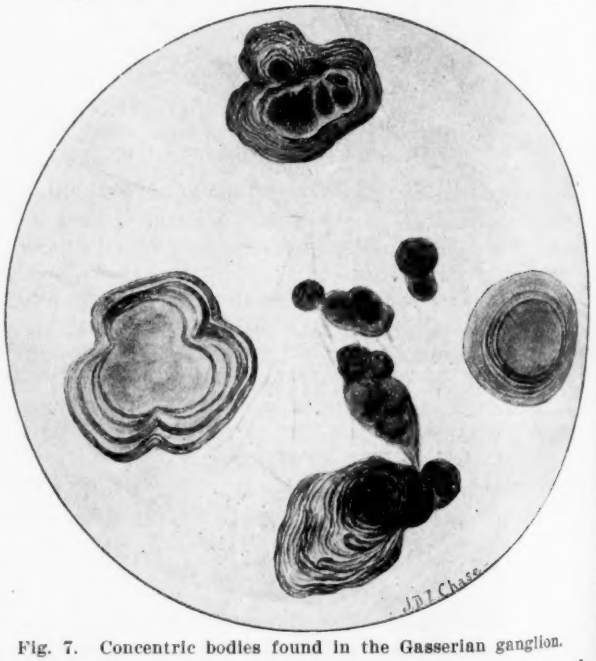

Fig. 7. Concentric bodies found in the Gasserian ganglion.

SUMMARY OF THE PATHOLOGIC CHANGES.

1. Tumefaction of medullary sheaths and axis-cylinders in certain bundles only, in all three divisions of the ganglion. 2. Tumefaction of axis-cylinders in a portion of the sensory root. 3. Numerous spaces in a portion of the sensory root, possibly resulting in part from degeneration of nerve-fibers. The sensory root, therefore, is not normal, and the condition in this root renders a return of the pain possible. 4. Quite intense degeneration by the Marchi method in the center and peripheral end of the ganglion and its peripheral divisions—a questionable change by this method in the sensory root.

The blood-vessels are not distinctly diseased, and no evidence is offered that the diseased condition of the nerve-fibers resulted from vascular degeneration. Neither do the nerve-cells, by the stains suitable to the method of hardening employed in this case, offer the slightest foundation for the theory of a cellular origin of tic douloureux.

MICROSCOPIC EXAMINATION OF THE SECOND GASSERIAN GANGLION REMOVED BY DR. CUSHING.

A description of this, if given in detail, would be very similar to that of the first ganglion.

First Division.—In some bundles the medullary sheaths are much swollen, and here and there a swollen axis-cylinder is found, especially in fibers cut longitudinally. An axis-cylinder may appear to be normal in one part of its course and swollen in another. The greater portion of the first division appears to be normal.

Second Division.—The condition of the second division is very similar to that of the first division. Some of the medullary sheaths and axis-cylinders are moderately swollen, but the greater number of nerve-fibers are normal. The small vessels contained within this division of the ganglion have thickened walls. The Marchi stain shows no distinct degeneration. This may partly be due to the hardening in formalin, for while this stain may be employed with formalin-hardened preparations the results are sometimes less successful than with Müller fluid preparations.

Third Division.—The third division is more altered than either of the other two; more nerve-fibers are diseased and the tumefaction of the medullary sheaths and axis-cylinders is greater. No alteration is detectable by the Marchi method.

Ganglion.—Most of the nerve-cells appear to be fully or nearly normal, but some are deeply stained and much shriveled. (Fig. 8.) The cells of the ganglion vary normally in the intensity of their coloring and size, but in the sections of this ganglion the cells which are shriveled are the ones most deeply stained by thionin. The ganglion was hardened in formalin soon after removal, and these shriveled cells can hardly be regarded as artefacts. Most of the cells extend to their capsules without leaving pericellular spaces, and the peripheral portion of the cells contains fewer chromophilic elements than the central portion, and these elements next to this clear peripheral zone are larger and more deeply stained than the others. We know, from v. Lenhossék's description of the cells of the spinal ganglion, that these cells of the Gasserian ganglion are normal. The nucleus is usually very sharply defined and central and the nucleolus deeply stained, but some nerve-cells are greatly shriveled and deeply stained, and in some the nucleus is peripheral. Some cells are also deeply pigmented.

Sensory Root.—The sensory root is normal.

So far as I know the condition of the sensory root of a ganglion removed for trifacial neuralgia has been reported in only two cases—one by Krause, and one by myself. Krause found the sensory root diseased and I found it normal. In Krause's case pain returned on the other side of the face. We can not say whether or not the occurrence of pain on the side from which the ganglion was not removed was caused by the diseased sensory root of the opposite side. In Dr. Cushing's first case the axis-cylinders of the sensory root were not normal. The tumefaction in these fibers was not excessive, and yet it was sufficient to lead me to believe that a recurrence of the pain in this patient is possible. I have examined the sensory root in three ganglia removed on account of prosopalgia, and only in this one case have I found this root diseased. When we remember that the sensory root of the fifth nerve passes to the sensory nucleus in the tegmentum of the pons, and that many of its fibers descend as the spinal root of the fifth nerve so low as the upper part of the spinal cord, we see that its fibers are distributed over a large area, and that when this root is diseased the diseased fibers are distributed over a considerable extent of the central nervous system. When the Gasserian ganglion is removed the cells in which this root arises are destroyed and the root probably degenerates throughout its length, and it probably loses the power of transmitting any form of irritation after removal of the ganglion. If the root is found diseased at the time of operation, it indicates that the degenerative process has extended centrally beyond the Gasserian ganglion, and the danger of a recurrence of pain is probably greater than when the root remains normal. It occurred to me that possibly the moderate tumefaction of the axones in the sensory root in Dr. Cushing's first case was produced by pulling on the root at the time of removal. The normal condition of the sensory root in the other two cases examined by me hardly permits such a theory. I have taken the sciatic nerve from a cat soon after death, and have forcibly pulled it apart, placed it in Müller's fluid, and examined the axis-cylinders, but I was not able to find the tumefaction of the latter. I fear, therefore, that we must regard the sensory root of Dr. Cushing's first patient as diseased.

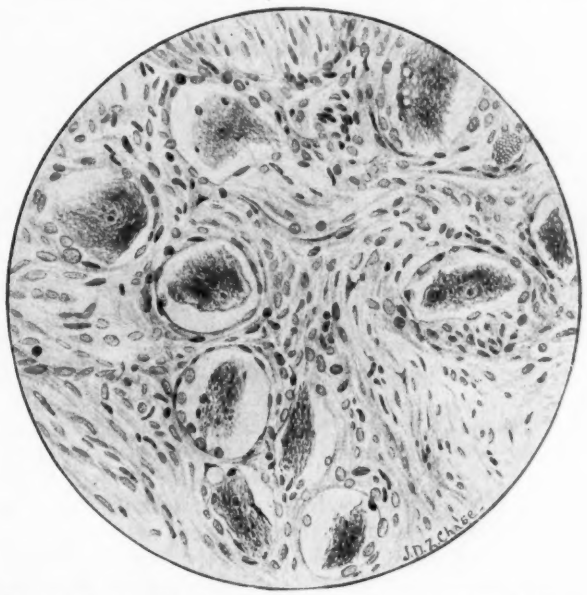

Fig. 8. Oc. 3; Ob. 7. Atrophied nerve cells within the Gasserian Ganglion (method of v. Lenhossék).

In the second ganglion removed by Dr. Cushing the nerve-cells are diseased. This ganglion was placed in formalin and in its preparation the thionin stain of v. Lenhossék could be employed. V. Lenhossék has given

such an admirable description of the cells of the spinal ganglion in man that we know the appearance of cells of a normal Gasserian ganglion very well. Most of the cells in this second ganglion are normal, but many are intensely shriveled and deeply stained. It is difficult to believe that these cells are artefacts. The degenerated condition of these cells does not prove that the primary lesions of trifacial neuralgia are in the Gasserian ganglion. The diseased cells are not confined to any one part of the ganglion. Once of twice before I have referred to the investigations of Lugaro and others. These observers found that the cells of the spinal ganglion belonging to the sciatic nerve were much altered when this nerve in the dog was cut, but that no distinct changes in the ganglia were present when the posterior roots or the posterior columns of the cord were cut. Lugaro concluded that the cells of the spinal ganglion are altered in lesions of their peripheral processes, but not in lesions of their central processes. The peripheral process of the nerve-cell in the Gasserian or spinal ganglion has been compared with the dendritic process of the nerve-cell of the spinal cord, and the behavior of the nerve-cell of the ganglion after division of its peripheral process as compared with its behavior after division of its central process indicates that these two processes are of different functional importance. With these facts before us the alteration of many of the nerve-cells in Dr. Cushing's second case is no proof of the primary lesion being in the ganglion. The second division of the nerve had been resected six years previously. Whether the cellular alteration was due to this I can not say, but it is not probable that it was. In this second case the sensory root was normal. We should naturally expect to find many of the nerve-fibers of this root diseased where many of the cells of the Gasserian ganglion are diseased, but nerve-cells may be more altered than the axis-cylinders arising from them.

A Gasserian ganglion removed on account of trifacial neuralgia and examined by Head,[3] by the Nissl method, was found to be normal, and the nerve-cells so perfect that they could be used as standard specimens of normal staining of the cells of the ganglion. It is a pity that Head does not give the details of this case. With this exception I know of no published report of the examination of the cells of the Gasserian ganglion by Nissl's method in a case of trifacial neuralgia.

In Dr. Cushing's first case the blood-vessels were not distinctly diseased. This would seem to indicate that in this case at least the process was not primarily vascular.

Recently two cases have been reported in which the Gasserian ganglion was removed and pain returned on the same side of the face (Friedrich,[4] Garrè[5]), but fortunately these cases are exceptions.

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A PATIENT—a young girl—in a French sanitarium slipped into the water-closet and bolted the door on her special attendant, then hung herself with a strip of cloth. Her father sued the physician in charge of the sanitarium for negligence and, according to the *Gazette Méd. de Paris*, the courts have awarded him the amount of his claim, $2000. He stated that he had called the physician's attention to the possible dangers of these retiring rooms, as his daughter had tried to commit suicide before.

SURGERY OF THE FIFTH NERVE FOR TIC DOULOUREUX.*

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It is the uniform experience of surgeons that there is no more fearful pain for a patient to endure than the persistent recurrence of what one of my patients always called "crashes of pain" in the side of the face. Its immediate, though transient, relief by simple section of the superficial nerves, is so much like the magic of art that it has been given as wide a trial as it ever should have. Brodie's reference to the "notorious failure of nerve section," in permanently relieving tic douloureux, echoed by Velpeau, Stromeyer and others of that time, is more emphasized to-day by accumulating experience. The accepted explanation of its failure, in that reunion of nerve channels is effected by natural laws of repair, has led to so many attempts to overcome this mischievous act of nature that we may now consider the success and failure of each and learn their relative values.

If the cause of pain is central, we may rightly assume that operation on the superficial nerve will not destroy the pain sense of the patient—hence it is useless. If the cause be peripheral, we must so far destroy the communicating channel as to prevent bridging over the gap by any reasonable reparative action. Hence the value of extensive resection of the nerve seems to be in direct proportion to its extent.

As the resection of the infra-orbital part of the second branch was replaced by Langenbeck's division on the floor of the orbit, and resection anterior to that, so the latter was displaced by Carnochan's more extensive resection from the foramen rotundum to the cheek. This latter has held its own with more recent methods and may now be fairly considered alongside of the Salzer and intracranial methods.

To speak of the Carnochan operation as "having been done" does not rightly justify the addition of many so-called cases in a statistical list, for like other difficult and dangerous operations it is possible to half do it by a bungling method, poor assistants, bad light, inadequate instruments or encountering very hard, unmanageable, posterior antrum walls.

I have had a case said to have had the operation done before, where I found much of the nerve still remaining. In my own experience I have found considerable inequality in extirpation of the nerve and branches. In judging of the value of methods, all who have had a varied experience may give weight to their personal views. In every field of surgery the statistical method is no more a criterion of value than what I would call the "personal impression" method. I do not hesitate to say, therefore, that the Carnochan operation, thoroughly done, holds a high rank with the deeper and more serious operations, and does not share their gravity.

In emphasizing the value of this operation on one branch only of the fifth nerve, I have often noticed that while the patient has designated the supra-orbital and lower maxillary branches as sharing the neuralgic pain, these two are as a rule at once and completely relieved by operation on the middle branch. Thus we can fairly ascribe much of the pain to reflex effect from some part of one branch to its neighbors. There is also a pain-

*Read in a Symposium on the "Fifth Nerve in its Neurological and Surgical Relations," before the College of Physicians of Philadelphia, April 20, 1900.

sense, or pain memory, as we may call it, shown in some cases of aggravated and inveterate tic which lingers for a few days in occasional cases, no matter which method of operation has been adopted. Although the majority of operations give instant relief, the patient may complain of the old pain for as long as a week afterward, and then it leaves and he remains cured. This exhibition of persistence of pain I have seen oftener in those who had resorted to morphin. As a rule the morphin habit engendered by tic is entirely dissipated by operation.

My personal experience in operations on the fifth nerve's branches, excluding all those on the inferior dental and on the supra-orbital, includes somewhat more than twenty cases; but of that number only I have notes: intracranial (Hartley's method), 5; Salzer, 4; Carnochan, 11.

Seven patients were 60 years or more, 3 between 50 and 60, 3 were 32 years and 7 from 32 to 50 years of age.

There was but one death, that of a woman 63 years old, with severe tic. She had borne the Hartley operation well, with section and evulsion of the second and third branches. When I was about to close the wound the patient made two feeble attempts to vomit, and breathing and heart action ceased simultaneously. Every effort at stimulating and artificial respiration, even with the Fell-O'Dwyer respirator, failed to resuscitate her.

In reviewing the five intracranial cases, I find most gratifying material to report:

The first patient was a woman of 60 years who had been subjected to a Salzer operation two years before, and had recurrence in three months. The intracranial resection was done with much ease. The second and third branches were seized with forceps and evulsed from the ganglion after section at the foramina and forcing out the stumps. The patient was freed from pain and left the hospital on the eleventh day. Two months later she died of pneumonia.

The second case was a most aggravated one of eleven years, in a woman of 65. I operated it in 1895, by Hartley's method, evulsing the second and third nerves from the ganglion. The woman was at once relieved and remains absolutely free from pain and in good health, approaching five years from the operation (letter received yesterday).

The second patient was a frail woman who had suffered for two years from severe trifacial neuralgia extending even to the neck; the operation was done after the usual Hartley method, and this is the case spoken of previously as a death under anesthesia, from fatty heart or shock.

The fourth, a man, aged 46, had become distracted almost to suicide by inveterate trifacial neuralgia of three years' standing. In July, 1896, I resected the intracranial portion of the second and third branches, between the ganglion and foramina; the operation was suspended on the first day, on account of grave hemorrhage on every side, while exposing the ganglion. The packing was removed the second day and dissection continued; again profuse bleeding and packing of the wound. At the third attempt, excellent exposure of the nerves was obtained, and each being grasped by a broad clamp was cut off and then evulsed from the ganglion, only half an inch being torn out, but with profuse bleeding, which again required packing. When the hemorrhage was controlled, an attempt was made to curette away the Gasserian ganglion, but again bleeding forbad it.

NEW METHOD OF OPERATING.

Fearing that the nearness of the nerve stumps in the canals to the torn Gasserian might allow restoration of function and pain, I interposed a piece of sterilized gutta-percha tissue, more than one inch long and half an inch wide, which more than covered both foramina. This I pressed down by an iodoform-gauze strip, which was continued so as to compress all bleeding. In twenty-four hours—fourth day after initial operation—the gauze was removed, the rubber was seen to be pressed flat on the bone and the brain allowed to settle down on it. Primary union occurred, and now, after four years, the patient remains in perfect health, retaining the rubber as left at operation. The anesthesia in his case is shown in the illustration, from a photograph taken some months afterward, when reporting his case (Surgical Society, October, 1896).

Violent tic douloureux—3 years. Hartley operation; second and third branches excised; rubber tissue interposed. Remains well after 4 years. Dotted surface shows anesthesia: vertical lines, partial anesthesia.

The fifth intracranial case is also one of the same class, but in a woman of 61, who had suffered in the gravest way for twenty-four years. All trigeminal branches were affected and there was tenderness on pressure over the external foramina, with constantly repeated shocks of pain. I did the intracranial operation in July, 1897, and resected only the portions of the second and third divisions, between the foramina and the ganglion. I made no attempt to evulse or disturb the ganglion. The hemorrhage was slight and I carefully interposed a sterilized gutta-percha tissue layer between the Gasserian and bone, so as to more than cover both openings. Primary union of the wound and instant and permanent relief followed. At this date—nearly three years after—I have examined her and find perfect health and no trace of pain. Anesthesia remains as after operation.

Thus, in the five intracranial cases, three remain cured, after the lapse of three, four and five years.

I have operated on four cases after the Salzer method.

The first was a woman of 60 years, operated on in June, 1893, with most satisfactory resection of portions of the second and third branches at the foramina rotundum and ovale. Recurrence of pain occurred in three months, and she was subjected to the intracranial method (Case one).

The second patient, a woman of 50, had been suffering for five years and was relieved for 1½ years after

my operation. Recurrence was in a moderate degree only, and I have never cared to subject her to the intracranial operation, on account of her general weakness and digestive disturbance.

The third case was in a lawyer, aged 32, who had suffered for ten years and had three operations on his inferior branch, by Halsted and Hunter Maguire, with relief a few months only after each. I did a resection of the second and third branches at the foramina retundum and ovale, by a modified Salzer operation, two years since, with instant and permanent relief. I interposed a piece of sterile rubber tissue also in this case, between the resected ends of nerve in the sphenomaxillary fossa, and it remains there after two years.

The fourth case was in a man of 52 years, who had been suffering five years on the right side. A modified Salzer operation was done, with clean excision of a portion of the second and third branches at their exit from the skull. There was immediate relief and he has had not a twinge of pain since then, two years after the operation.

By the Salzer method there were no deaths. By the modified Salzer, adopted in two cases, I found it easy to expose the nerves in the sphenomaxillary fossa, by splitting the temporal muscle fibers vertically, without cutting the coronoid process, simply dividing and depressing the zygoma. When stretched by retractors, ample space was afforded and the coronoid could be lowered by opening the mouth at the same time. Thus the partial anchylosis following the usual Salzer method was avoided.

THE CARNOCHAN OPERATION.

This has been rather a favorite with me and represents 11 of the 20 severe cases operated on. Two patients were 32 years and 4 about 60 years of age; the others ranged between. I have been able to follow 8 of the 11 cases; 1 remains cured after twelve years; 1 after ten years; 1 died after six years, cured; 1 remains cured at five years; 2 remain well after one year; 1 was not relieved even by subsequent operation by Dr. Keen (case reported of Gasserian ganglion); 1 remained well at two years, when he was lost sight of; 3 were relieved and lost to view.

The possibility of thorough removal of the nerve behind the Meckel's ganglion is well shown in the specimen passed around, where the two filaments going to that ganglion are shown.

I have been interested in noticing cases of previous operation for removal of a large branch, that the foramen of exit closes when of no further use. Thus the mental foramen soon wastes to the size of a pin-point after the removal of the inferior dental nerve.

The anesthesia following Hartley's, Salzer's and Carnochan's operations is interesting. The removal of the second and third branches inside the skull leaves the half nose, cheek and upper lip only numb, but not completely anesthetic, as is the rest of the face, owing to a nasal branch of the ophthalmic, which covers the same distribution as the orbital branch of the superior maxillary, which comes off between the external and internal foramina. When the Salzer incision is made, this branch escapes and the nose, cheek and upper lip are often fully sensitive.

In conclusion, my experience leads me to advocate a thoroughly done Carnochan operation, with clean resection of the second branch to the foramen retundum, for most bad cases, even when the first and third branches seem to share the neuralgic shocks. The latter are usually relieved by operation on the middle branch. If one chooses to do the Salzer, which has some advantages in being less severe than the intracranial and more thorough than the Carnochan method, then I advise a section of the zygoma turned down with skin, and a muscle splitting of the temporal rather than coronoid section. If the intracranial method is adopted, as it must be in many grave cases, I advocate the simple section and limited excision of the second and third branches from the Gasserian to the foramina, and interposition of a piece of sterile rubber tissue, impermeable and non-conducting, adequate to cover both openings. I see no reason for believing that the resection of the Gasserian ganglion is necessary to the thorough severance of nerve connection with the brain. This step may be the greatest element of danger and, unless a tumor of the ganglion exists, is uncalled for. If a tumor exists it seems useless. In most cases of inveterate tic a chronic neuritis exists, usually of the middle branch. Hence the quick and permanent cures which we are able to record by excisions anterior to the Gasserian ganglion.

13 West Fiftieth Street.

NATURAL HISTORY OF TIC DOULOUREUX, WITH REMARKS ON TREATMENT.*

BY CHARLES L. DANA, M.D.
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If we hope to judge wisely as to how much good certain forms of treatment do for tic douloureux, we must know its natural history, which is not yet very fully understood. For though the disease is common, its origin is often unexplainable and there is none in which so much desperate effort is made to break up the course of the attacks and interfere with the natural symptoms. I have thought, therefore, that I could serve the purposes of this discussion best by devoting a good part of my time to this side of the subject.

It is one of the advantages of somewhat mature years that we are able to take a wider view of the course and of the history of the diseases as shown in our patients, and I have been able to make a close study of a number of my own cases from the beginning to the end. What I have to say now is based very largely on the recorded history of over fifty cases of tic douloureux, some of which I have had under observation for from five to ten years, and most of which I know the entire history of from the outset.

Pathogenesis.—Tic douloureux is, as I understand it, a degenerative neuralgia occurring in the great majority of cases, at or after the middle period of life and due to a degenerative change, sometimes amounting to neuritis, in the nerve and its ganglion, and probably in the blood-vessels which supply it. It attacks women[1] about twice as often as men, taking the whole period of the disease, but it rarely attacks men before the age of 40. I have seen only three cases of this kind of tic douloureux in a man under that age, whereas there have been ten women in whom the disease began under that time. Thus, it may be said to be at least three or four times as frequent in women under 40 as it is in men.

There is rarely any distinct hereditary taint, still, I have had one patient, aged 46, whose father suffered from the disease at the same time. In another patient

*Read in a Symposium on the "Fifth Nerve in its Neurological and Surgical Relations," before the College of Physicians of Philadelphia, April 20, 1900.

[1] As to sex, among 57 cases there were: males, 20; females, 37. Under 35 there were: males, 3; females, 10. Over 35: males, 17; females, 27. Ages at onset of disease: 20 to 30, 5; 31 to 40, 7; 41 to 50, 7; 51 to 60, 17; 61 to 70, 15; 71 to 80, 5; 81 to 90, 1. Side affected: right, 22; left, 14.

the grandmother had tic during her old age, and in a third the mother also had it. The most common neurosis found in the family is that of migraine, but this is so common generally that it can hardly be said to count in the personal history.

The most common previous nervous disorder in the patient, however, is also that of migraine, which I find in one-fourth of my patients. A common exciting cause is some overwork or strain. (14 per cent.)

No doubt many have observed that the initial disease begins as an acute trigeminal neuritis associated with herpes. This was the case in six of my patients. This fact of an initial herpetic neuritis is one of much importance as pointing to the origin of the disease in some cases from an infection causing a distinct peripheral neuritis. In a number we find that the cause is a local disease of the gums or tooth. In about 20 per cent. then there is an initial neuritis or local disease. I have also seen it start as the result of la grippe in three cases, and of exhausting hemorrhage in another.

Tic douloureux is, in the vast majority of instances, a disease of the second or third branch of the trigeminal nerve. It is extremely rare for it to begin in the ophthalmic, or remain localized in that branch alone, whereas it often affects the second and third branch alone for a long period of time. Among forty-five chronic cases I find only one instance in which the trouble was confined alone to the first or upper branch of the fifth nerve.

Types.—Cases which begin in women in early life have always been a puzzle to me, and I have always been doubtful as to their true character, although they do eventually seem to assume the type of a true tic. In carefully studying my own histories, it seems to me that these early ones are to be explained in this way: The patients are almost always young women suffering from migraine, and their trouble is preceded by frequent attacks of this trouble. After a number of years this migrainous disorder seems to become chronic and in a measure localized. It then settles in the second or third, or perhaps all three branches of the nerve. Such patients have, however, in addition to the sharp pains along the course of the nerve, diffused pains involving the head and often each side of the face. Cases that develop at the degenerative period of life are rarely associated directly with migraine, although one often gets a history of some migrainous trigeminal neuralgia, or attacks of migraine occurring early in life. The malady, however, often seems to settle down on the nerve as the result of the exciting causes already referred to, although referring to no particular predisposing neurosis.

I am disposed, in view of the facts referred to, to think that there are at least two particular and distinct types of tic douloureux, not including the purely symptomatic pains due to extra-neural disease.

The first I should call the migrainous type of early life, and I consider it an evolution of a definite trigeminal neuralgia on the basis of a migrainous neurosis. It is seen oftener in women. The trouble is originally central and not a disease of the Gasserian ganglion. Later it is possible that the fibers of the trigeminal nerve, through some inherent defect, incur degenerative changes and a true degenerative neuralgia develops. But it is to be borne in mind that in the early stages at least there is very little real disease in the fifth nerve. It is a disorder of the central sensory neuron.

The second type is the more common one, occurring after the age of 40 and affecting men at least half as often as it does women. Here the disease sometimes starts as a true infective neuritis in the form of a herpetic or ascending neuritis, due to some local disease of the gums or the antrum, or the osseous tissues. Some of these herpetic forms run an acute course, lasting only a few weeks or months, and are easily cured.

Tic douloureux is sometimes purely symptomatic of local disease of the bone, of a tumor, etc.

Natural Course.—The natural course of these different forms of neuralgia is somewhat as follows: The persons who suffer from migrainous tic in early life, finally localizing itself as a true tic, rarely get cured, but have a long and tedious period of suffering. The prognosis is more unfavorable than that of ordinary migraine; however, like the latter, under exceptionally good constitutional conditions, periods of long remission occur, and sometimes the trouble spontaneously disappears. This tendency to disappear is probably somewhat increased after the age of 50, just as is the case with migraine, and I have a patient in whom the whole trouble disappeared at this age, after she had had a tic for twenty-nine years, the cause of the cure being asserted to be "Christian Science."

These cases also of the migrainous type, so far as my experience goes, are made worse by the ordinary operations for tic. I do not know what the result of the removal of the Gasserian ganglion would be in such early cases, but I have never seen any cures from the other minor surgical operations, although I have had a number of patients who have had these made on them at different times. Such operations may give temporary relief, but not always. Patients of this class are ill adapted for operation, because the trouble does not lie exclusively in the trigeminal nerve, but also in the central nervous system.

Of the second class of patients the natural history is more definitely known. Among seventeen cases of which I have definite histories from beginning to end, in seven the disease has stopped or has been cured. In six others it has been improved and kept under control, while in four its progress has not been affected by anything that has so far been done. Thus it appears that in at least 20 per cent. the disease is amenable to treatment or is relatively benign.

In these cases in which the trouble has been relieved entirely for a period sufficiently long to feel that it is practically under control, one attributes this relief to animal magnetism, two to operations, three to the minor operations of removing the tooth and washing out the antrum, one to "Christian Science" and the remainder to various measures, mostly the use of strychnin, tonics and rest or the natural course of the disease. With two exceptions all the cases which were relieved or cured occurred in persons in whom the trouble began after the age of 40, and in whom it had been lasting for not more than eight years, the average being about four.

The average duration of the disease, in which the malady stopped or was brought under control without any very definite or special medical treatment, was about five or six years, and my conclusion is that tic douloureux, beginning in persons at the age of 40 or over, has a natural tendency to run its course, this course ranging from five to twelve years. It usually reaches its height at the fifth or sixth year, and then has a tendency in some cases to spontaneous cure. The duration[2] of non-curable forms may be the even life of the patient. I have seen cases in which the duration was twenty-nine

[2] Duration of cases: cured or well-controlled without surgical measures—At 55 to 60, 5 years; 64 to 72, 8; 55 to 59, 4; 66 to 69, 3; 61 to 64, 3; 21 to 50, 29; 60 to 66, 5; 57 to 61, 4; 58 to 61, 3; 58 to 63, 5; 61 to 71, 10; 82 to 88, 6. Side affected: right, 22; left, 14.

and thirty-two years, others where it lasted twelve, seventeen and eleven.

One of the most characteristic features in the natural history of tic douloureux is its tendency to remissions. These occur for periods of one or two months, but they can be artificially produced by various methods of treatment. The surgical treatment will usually produce a remission of one-quarter to one-half a year; the medical treatment will often produce remissions of from six to ten months. These can be renewed by further systemic therapeutics. After the disease is long established, however, i. e., after six or seven years, there is apparently no measure, except a surgical one, which will absolutely and surely stop it. The surgical operations, except those for the removal of the Gasserian ganglion, produce only temporary remissions; all the medical measures have the same effect. As to the relative efficacy of the two measures, I can say, without any bias, that in most cases we can secure a remission by the medical measures almost as certainly as we can by surgery, except by the major kind. No drugs, however, and no surgical operation will arrest the disorder permanently. They will only lengthen the remissions and perhaps shorten the course.

It is perhaps known that for some years I have advocated a systemic treatment for tic douloureux, by means of heroic doses of strychnin. After experimenting with this method of treatment for now over six or seven years, and including about fifteen cases, I have reached this conclusion regarding it: In early cases of this kind, that is to say in the first and second years, the strychnin treatment will almost invariably arrest or control the disease in anemic and exhausted patients. In cases that have lasted over six or seven years, and in those with neuritis and sclerosis, the result is doubtful, and there may be a failure to secure even a remission. In anemic ones, however, even of long standing, it is often more effective, though relapses will occur. Among fifteen cases I have had only four distinct failures. In the very old cases, lasting fifteen or twenty years, medical treatment is practically valueless, no matter what is done.[3]

I have few favorable statistics to report of the results of surgical operations. I have seen absolutely none in which these succeeded in curing the patient, although one of my cases included that of a patient in whom the Gasserian ganglion was removed. I have seen operations, however, produce remissions lasting for two years. I have, as already stated, had three patients in whom the trouble ceased after the tooth had been removed and the antrum washed out. In no case have I known relief by the removal of teeth, or at least nothing more than temporary relief. Among 42 cases, 11 had had 24 operations, with no permanent cure in any case. One only was that of removal of the Gasserian ganglion.

As to the general matter of treatment it is better to record experiences than opinions. I have seen one case apparently helped by the opium treatment; but it is dangerous and not usually effective. Three of my patients had become opium habitues. Three patients, after long courses of medical treatment, and in one instance after an unsuccessful operation, were cured by removal of a tooth and washing out the antrum. In another this did no good. One patient thinks she was cured by animal magnetism, and one by "Christian Science." Remission followed in one case after prolonged use of the static breeze an hour daily for two months. This I believe was purely a natural remission. One patient had her ovaries removed with the result that the face was worse and she had a vaginal neuralgia.

I have seen little good result from aconite or from any of the benumbing or narcotic drugs. Medical treatment is most successful which is addressed to the arthritic state, when that exists, and to the arterial sclerosis and gouty taint. In some of this latter, men of full habit and hard arteries tonic measures do harm and after a course of rest and arteriosclerotic or neuritic measures, surgery should be promptly applied. All measures will be more effective if applied at the beginning of the disease, and again at the fourth or fifth year when the trouble is at its height; or again at the period of the climacteric in those whose neuralgia began relatively early in life.

In conclusion, therefore, I should say that the early forms of tic douloureux, such as I have called a "migrainous tic," occurring usually in women, should not be operated on. There are some exceptions to this, however, in which tic douloureux occurs in early life, due to a distinct local disease, such as an inflammation of the nerve, or of the antrum, or of the jaws. In true tic of the degenerative period of life, prompt medical treatment will usually control the disease and operation is rarely indicated at first. In tic which has lasted three or more years, it may be safely said to the patient that medical treatment may produce a remission and that this remission may be repeated and that eventually the disease may be controlled by repeated treatments, but this is not at all sure. It may be said here too that a minor operation may give more relief than medical treatment. The question of prescribing major operations must be decided in each individual case, on its special merits.

TABLE SHOWING DURATION AND TREATMENT OF 42 CASES.

1. Male. Duration, 55 to 60; spontaneous cure.
2. Male. Duration, 64 to 72; strychnia; relieved; eight months relapse: cured for 3 years by removal of tooth and washing antrum.
3. Female. Duration, 55 to 59: 3 operations; no relief; strychnia; remission 6 months; strychnia; remission 8 months; cured—animal magnetism 10 months.
4. Female. Duration, 66 to 69; strychnia; improved—fairly well 2 years.
5. Male. Duration, 61 to 64; strychnia; relieved 1 year; slight remission; relieved 2 years.
6. Female. Duration, 21 to 50; strychnia; no result; cured by washing out antrum and Christian Science.
7. Female. Duration, 60 to 66; strychnia; relieved; remission; cured by washing out antrum; patient took morphia.
8. Female. Duration, 57 to 61: strychnia; relieved; disease controlled 2 years.
9. Male. Duration, 22 to 31; operation; relieved for 2 years; return.
10. Male. Duration, 31 to 33; strychnia; total failure; operation; no return in 1 year.
11. Female. Duration, 58 to 63; strychnia; relieved; disease controlled 2 years.
12. Female. Duration, 68 to 71; strychnia; relieved 6 months; remission; relieved again; disease still under control.
13. Female. Duration, 52 to 58; strychnia; relieved for 1 year; strychnia; no relief; patient lost sight of.
14. Female. Duration, 55 to 57: strychnia; relieved for 8 months; relapse?
15. Female. Duration, 31 to 47; strychnia; slight relief.
16. Male. Duration, 31 to 35; static electricity; remission 2 months; static electricity; remission 6 months; static electricity; remission 2 months; operation; no relief; strychnia; remission 4 months; strychnia; remission 4 months; return.
17. Male. Duration, 61 to 63; strychnia; no relief; disease still continues.
18. Female. Duration, 25 to 65; 3 operations; no relief; strychnia; no relief.
19. Female. Duration, 30 to 44; 2 operations; no relief.
20. Female. Duration, 45 to 52; strychnia imperfectly given; no relief; disease disappeared; patient suffered from melancholia.
21. Male. Duration, 50 to 62; operation; no relief; 3 other operations; no relief.
22. Male. Duration, 31 to 40; no regular treatment; patient somewhat better.
23. Female. Duration, 65 to 72; 2 operations; no relief; strychnia; no relief.
24. Female. Duration, 24 to 42; not heard from.
25. Male. Duration, 46 to 48; strychnia; somewhat improved.
26. Female. Duration, 25 to 28; relieved without any special treatment.
27. Female. Duration, 45 to 52; morphia.
28. Female. Duration, 30 to 40; nasal pain.
29. Male. Duration, 58 to 67.
30. Male. Operation; relapse.

[3] The details of the technique of this method are given in full in the Post-Graduate, July, 1896, and in the 4th edition of my Text-Book of Nervous Diseases.

31. Female. Duration, 82 to 88; 2 operations; relief 4 months; operation: no relief; medical treatment 6 months; pain ceased; patient died 4 months later of old age.
32. Male. Duration, 33 to 43; strychnia; relief.
33. Male. Duration, 51 to 54; strychnia.
34. Male. Duration, 50 to 60; strychnia; relieved.
35. Male. Duration, 39 to 47; operation; relieved 1 year; strychnia; improved.
36. Female. Duration, 66 to 68; strychnia; relief.
37. Female. Duration, 60 to 65; general medical treatment; relief; lost sight of.
38. Female. Duration, 53 to 56; medical treatment; relief.
39. Female. Duration, 55 to 60; medical treatment; lost sight of.
40. Male. Duration, 55 to 61.
41. Female. Duration, 71 to 75.
42. Female. Duration, 23 to 35.

OPERATION FOR EXSTROPHY OF THE BLADDER BY SONNENBERG'S METHOD.

BY J. RILUS EASTMAN, M.D.
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In January, 1899, a classic case of exstrophy of the bladder in a boy 13 years of age was brought to the writer's notice. The condition of the kidneys was such that rectal implantation of the ureters as a means to relief was not to be considered. The urine discharged from the left ureter contained crystals of the salts of urates and phosphates in great abundance, blood casts, epithelium and epithelial and granular casts. Traces

FIG. 1.

of albumin were also present. The urine from the right kidney was much clearer, of very little more than normal specific gravity, and contained a few granular casts and some epithelium. There was continual pain in the left lumbar region.

In view of these facts, the Sonnenberg method was chosen as the one most suitable for application in this particular case. The operation was made in February, 1899. It consisted in the detachment of the ureters from the extroverted bladder mucosa, and implantation of these into a groove made by a median sagittal incision on the dorsum of the dwarfed and clubbed epispadic penis. The raw and exquisitely sensitive bladder mucosa was cut away and the margin of the defect drawn snugly together and sutured about the two ureters as they coursed over the cartilaginous symphysis pubis.

The left ureter refused to heal in its new position. It became so engorged with inorganic deposits as to become almost pipe-stem-like in consistence, and gangrene of the exposed portion of this ureter developed promptly. There seemed to be no alternative but to remove the left kidney, and this was done. The remaining kidney has since—one year has intervened—discharged the extra

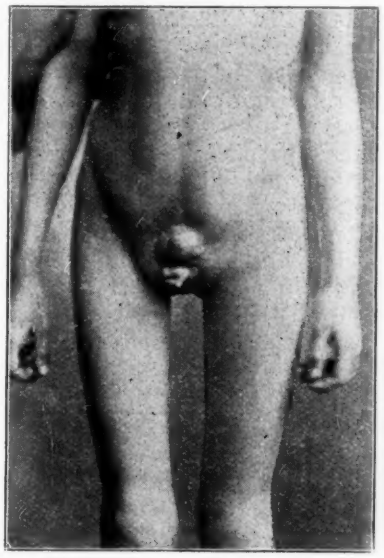

FIG. 2.

work imposed on it, without evidences of serious disorganization. Its condition at present is in no wise worse than before operation. The site of the extroverted bladder is now represented by a tough scar. Several futile attempts were made before the urinal shown in Figure 3 was finally constructed. As will be seen, it consists of a semispheroidal cup with a supplementary sacculation at

FIG. 3.

its lower margin, extending slightly backward over the perineum. The margin of this cup fits accurately against the pubic and supra- and infra-pubic skin, and is made soft by a thin rubber rim. An ordinary rubber urinal is attached to the cup by a double rubber tube. A spiral wire is placed in this tube to prevent kinking. A valve is inserted in order that the urine may not be

thrown back into the cup by compression of the rubber tank. This urinal neither leaks nor causes pain. No urine whatever escapes, while the patient is in the standing or sitting posture. In the dorsal recumbent posture there is no leakage, but when the patient lies on the side there is an escape of a few drops per hour. A small opening near the upper margin of the cup effectually prevents the passage of air through the valve into the rubber tank. The presence of this opening is very essential; for without it air, which finds its way into the cup under the rubber rim, would be forced through the valve into the rubber tank, thus encroaching on the latter's capacity for containing urine. It is not the writer's purpose to discourse on the respective merits of the various operative methods for the relief of exstrophy of the bladder, but he wishes it to be understood that the operation of Sonnenberg is not presented by him as a substitute for the Maydl operation of rectal implantation. It can not but be conceded that Maydl's method has its distinct indications. Given a case of bladder exstrophy with a robust general constitution and sound kidneys the method of rectal implantation must present itself for serious consideration as the only procedure by which the patient can be brought to a condition of passing comfort and happiness. Albert, Roux, Simon, Holmes, Lloyd, Boari, Allen, Herczel, Rudygier, Trombetti, Rosenotti and Frank have all made successful implantations into the flexure coli, and Krynski, Vignoni, Pisani, and Fowler have made rectal implantations, each by his own method. Maydl's record is undisputably good. The dangers of ascending pyelonephritis seem to have been distinctly reduced by his precautionary removal of the bladder wall flange containing the valve-like openings of the ureter into the cavum vesicæ, and the dreaded proctitis seems to develop only rarely.

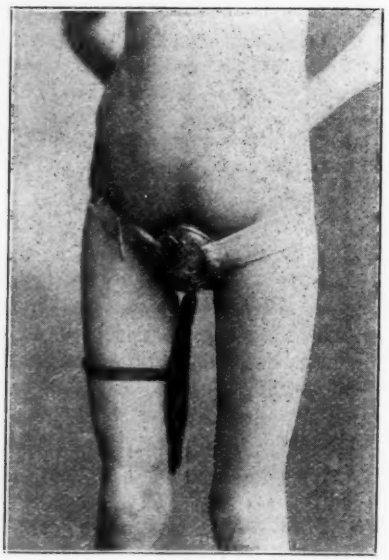

FIG. 4.

In cases of ectopia vesicæ, however, presenting unsound kidneys, Sonnenberg's operation in the light of present knowledge is certainly the one of choice. Its simplicity of execution is notable. It accomplishes all that can be accomplished by tedious flapping methods in much less time. The patient depicted enjoys very good general health. He attends school regularly and is apparently unhampered in play and work, by his deformity.

VISION AND COLOR PERCEPTION FOR RAILWAY SERVICE.*

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At the last meeting Dr. Pritchard favored the Academy with an article on the "Physical Examination of Railway Men," which included the test for vision and color perception. In the discussion that followed, many valuable points were brought out, and in considering the vision and color perception for railway service I must necessarily repeat some of the facts mentioned at that meeting. For efficient service it is essential that those who give and receive signals have normal vision and perfect color perception.

At the present time no uniform standard exists among the various roads that require applicants to pass an examination previous to entering their service. Their standard varies from a high to a low one. This is not as it should be, for there ought to be a uniformly high standard for physical examination, vision, and also some uniformity as to the colored yarns, flags and lights used. The vision for enginemen should be 20/20, or normal, with each eye, without the aid of glasses, and they should have normal refraction when entering the service. Those who serve as station agents, conductors, brakemen and switchmen should have vision of 20/20 with one and not less than 20/30 with the other eye, without glasses, and be free from hypermetropia of more than one diopter, on entering the service. Enginemen who have been in the employ of a company for five or more years and have proven themselves competent and trustworthy should be retained, everything being equal, if their vision with one eye is 20/20 and the other 20/40, without glasses.

It is a serious question as to what should be done with a trusted engineer, who has been in the service of a company for many years and become thoroughly familiar with his route, when his hyperopia becomes absolute and impairs his vision for distance. It does not seem just that such an employee should be laid off, when, with the aid of glasses, he is better qualified than a new man without them. Certainly the personal equation should be considered. In deciding on what shall be done with such an employee, the chief surgeon or oculist should have the right to grant some leeway and retain such a one, though he fall somewhat short of the standard properly established for new men. There are serious objections to allowing an engineer or fireman to wear glasses for distant vision. The lenses become dusty, and in cold or stormy weather the moisture will accumulate and blur the vision. Should the glasses become misplaced, the employee may for the time be disqualified for service. Some companies grant old employees the privilege of wearing glasses, while others refuse to permit their use. Without the permission to wear them we must say to the faithful employee: "Thou art weighed in the balances and found wanting." Glasses should be permitted for near vision, with which No. 2 Jaeger type can be read at fourteen inches.

Shall re-examination be required? Most certainly. As it has been clearly demonstrated that the eyes do change, they should be re-examined at regular intervals of from two to four years, and always after an attack of serious illness or accident. The difficulty regarding glasses, which would ultimately be required, is suffi-

*Read before the American Academy of Railway Surgeons, Omaha, Neb., Oct. 12-13, 1899.

cient reason for considering the refraction as well as the acuteness of vision of each new applicant for railway service. As a precautionary measure the pupilary reflexes and fields for form should be tested.

Dr. Williams of Boston, in his contribution on "Form and Color-Vision in Railway Service,"[1] has so clearly presented the subject of color perception and the tests to be made use of, that I here quote a part of his article, which I most heartily endorse: "The standard examination for color-vision should include three things: 1, a test with colored signal-flags; 2, a test by comparison of colors by the Holmgren worsteds; 3, a test with colored lights seen through openings of regulated size, which will form small images on the central part of the retina.

"The acuteness of color-vision varies considerably from the normal standard, as does form-vision. We may have a feeble color-perception, an incomplete loss of color sense, generally for red and green, or a complete loss of perception for one or both of these colors, and in rare cases a complete loss of all color-perception, in which the solar spectrum looks like a grey smear of varying shade, but no color. The object of our test is to discover the extent and character of the defects, and whether they are sufficient in amount to disqualify according to the standards adopted. The test with flags shows whether the man can give correct names to the flags, and can tell their use and meaning. It is also desirable to use one of the flags at a time as a test-object, and get the applicant to pick out from the heap of Holmgren's worsteds all the colors that look like the flag. It will often be found that the correct names can be given to the different flags even when the test by worsteds and colored lights shows a considerable defect of color-sense, but when used as a comparison test a green may be selected among the other colors as looking like a red flag, or vice versa. The second test, by comparison of colors without naming them, selecting from a large number those which appear to the applicant like certain test-skeins, light green or pink, according to the method proposed by Professor Holmgren, is the most satisfactory and easily applied of all the good qualitative tests, but it does not give a sufficient test for small central scotomata.

"I have recently had a conductor who passed both the Holmgren and the Thompson tests without making a single mistake, and who selected his colors without hesitation, but when examined by colored lights transmitted through small openings, or even with switch-light lenses, before a lamp at twenty feet distance, he called a red light 'white' in four different cases; he had a central defect in the retina, probably caused by the use of tobacco in excess, yet the area affected was so small that the retinal image of the flag or the skein of worsted was formed partly on the diseased retina and partly on the healthy portion outside the scotoma, where the color could be easily recognized, but when the retinal image was reduced in size, as with the lights, it was formed entirely within the borders of the scotoma, and red lights were called white or sometimes green. It will not do, however, to substitute the tests with such lights for the Holmgren tests, as the lights give little chance for comparison or for the selection of confusion colors, and for ordinary cases of congenital color defect it would take a long and tedious examination to reach the same result that could be arrived at more quickly by the worsted test. On the other hand, the test with lights, with regulated openings, should be used in addition to the worsted test, as was first proposed in Holland."

[1] Trans. Am. Oph. Soc., vol. viii, part 1.

The test with transmitted lights may be made at twenty feet, or six meters, through an opening 2 mm. in diameter; through such an opening a person with normal vision and color perception will at once recognize the color. Dr. Williams' instruments for testing with colored lights is so constructed that the standard colors can be exposed through openings of sufficient sizes. By such an instrument the examiner is enabled to test the form-color-sense and detect any defect that may exist in the central portion of the retina.

In reference to the test "with Holmgren's worsteds it is possible to make a distinction between some of the greater variations in color sense, for if a person is hesitating, picks up some confusion colors and compares them with the test skein, perhaps selects them and then discards them, or picks up some of the true colors, and after comparison rejects them, finally selecting none of the confusion colors, it shows that he has a feeble color perception; if he selects with the green some of the confusion colors, but with the pink or rose skein makes no mistake, it shows he has an incomplete defect; but if with the green skein he selects confusion colors in addition to the greens, and with the rose skein selects with the rose colors some blues or violets, it shows he has complete defect for red, or if with the rose skein he selects in addition to rose colors some greens or grays it shows he has complete defect for green."

"The tests for both form and color-vision should be made when the man is not fatigued by a long tour of duty or exposure, for it has been found that the acuteness of both form and color-perception is often diminished after two hours or more of engine work. After long runs and unusual exposure this temporary reduction in acuteness may be considerable, and it furnishes an additional argument for insisting on a high standing for such service. If one-half of normal vision were to be accepted as a minimum for each eye when the person was rested and in good health, the conditions of service might easily reduce this far below the danger point, but if a high standard is required the vision may be temporarily reduced by fatigue without becoming dangerous."

In conclusion, I would emphasize the following points: 1. The adoption by railway companies of a uniformly high standard of vision for men entering their service. 2. Uniformity of tests with colored flags, yarns and lights. 3. The re-examination of employees at regular intervals and after serious illness or accident.

DISCUSSION.

DR. JOHN F. FULTON, St. Paul, Minn.—It has been my privilege to have had quite an extensive experience in the line of work suggested by Dr. Bane's paper, and in order to make a success of the practical rules for examining candidates for train service as to their condition as to acuteness of sight, acuteness of hearing and color sense it is necessary to have the officials of the road in sympathy with and interested in the work of their oculist. When this subject is first brought to the attention of the railroad officials, they are disposed to look on the work as of little importance, and will give it but indifferent attention, but if you can succeed in obtaining their presence at a few examinations of candidates who are seriously defective, they will at once see the importance of the work and will then be disposed to make the examinations more severe than necessity demands.

For a number of years I have been doing this class of work for two of our Pacific Coast lines, emanating from St. Paul and Minneapolis, and have been consulting oculist for a number of other roads; consequently during the last ten years there has been examined, under my direction, a large number of men in train service, probably twenty-five or thirty thousand. Judging from my own experience in this work I am disposed to look on the requirements as suggested by Dr. Bane as some-

what severe. If a man has vision of 20/20 in one eye and 20/40 in the other, I would have no hesitation in passing him, certainly if the slight defect in sight is due to a refractive error which can be completely or partially overcome by proper correction.

How often should each employee in train service be examined? This is a question well worth our careful attention. My own rule on the subject is as follows: All new candidates for train service should be examined before being employed, and re-examined whenever promotion takes place, or whenever they are transferred from one division to another, and all employees in train service should be examined every three years.

In regard to the examination for color sense, I do not know anything that requires more careful and conscientious work on the part of the oculist than those patients who at first hesitate as to matching of colors, it being often difficult to decide whether or not they are really color-blind, or "color ignorant" or " color stupid." It will be frequently found that such men, after repeated examinations, will demonstrate that their color sense is perfect and that they are perfectly safe men to be employed in train service.

The laity and many of the general practitioners look on color-blindness as a congenital and incurable defect. This is by no means always the case. Defects in color sense are frequently due to the excessive use of stimulants, such as tobacco and alcohol, and in the early stages thus acquired the trouble is completely curable by removing the cause; hence the importance of making frequent examinations.

What shall we do with old and trustworthy employees in train service, who have lost one eye while in the employ of the company and have perfect sight in the remaining one? We will all admit that it is not perfectly safe to retain such men, yet it seems like a great hardship to dismiss them on account of an accident which has occurred, while they are rendering faithful service to their employers. This is a matter more for the officials of the road to deal with than for the company's oculist. One of the most serious accidents with which I am familiar was unquestionably due to the defects of a one-eyed engineer. As you know, in all one-eyed men the range of the field of vision is not as large as with both eyes, and in the case alluded to there was an obstruction on the track on a sharp curve, which he failed to see, resulting in a most serious accident, costing a number of passengers their lives and causing the destruction of a large amount of property.

Equally as important as the testing of the eye-sight in railroad employees is testing the acuteness of hearing. General surgeons and inexperienced oculists who first begin the work are apt to depend too much on the tick of the watch as a test, but experience will soon teach them that it should only be utilized when making the preliminary examination. If at this examination the candidate can not hear the watch tick beyond six inches, he should be referred to an experienced aurist, and if he finds no progressive disease of the ears, and that the candidate's acuteness of hearing is normal for whispered and spoken speech, he should have no hesitation whatever in passing him for train service. I am familiar with the requirements of one road in this department where the surgeon required that the watch should always be heard at eighteen inches. It happens to be a small road, so fortunately no great harm was done. Should this rule be enforced on a large one, where they employ seven or eight thousand men in train service, it would mean the dismissal of from five to eight hundred of their best ones. In cases where we are in doubt as to the progressive nature of the trouble, a certificate should be given, limited for one year.

The work of the oculist for the railroad company should be divorced as much as possible from the work of the chief surgeon, because it will always happen that, if the chief surgeon attempts to interfere with the oculist in his work, he will so cripple him that he will not be able to get results satisfactory to the candidates, to the road or to himself. I have been particularly fortunate in my own association with the chief surgeons of the different roads for which I work, as they have not shown any disposition to interfere but, on the other hand, have given their best assistance to make the work a perfect success.

DR. J. T. ESKRIDGE, Denver, Colo.—I would raise a medico-legal question in this connection. I think the chief surgeons and managers of railroads are the responsible parties in this matter. This question suggests itself: When a man is re-examined and color perception is less than that of other employees newly accepted, what responsibility would the railroad have to bear if a person should be injured because of the defective vision of an old employee. It seems to me that if it were shown that the old employee did not have perception sufficient to prevent an accident from occurring, the railroad would be responsible, and the chief surgeon, who is mainly concerned in their cases, should co-operate with the oculist and inform the managers of the road when the vision of the old employee is becoming defective.

DR. T. B. LACEY, Council Bluffs, Iowa—There was one feature brought out by Dr. Bane, in his paper, which is worthy of further discussion, viz.: that in the examination of applicants for positions, or old applicants, we ought to have their records as to their condition when they are examined. He referred to the fact that a man in doing certain work has deterioration of vision due to the energy he has expended, and there is considerable truth in that. I have examined railroad employees who have been instructed to come to me for that purpose, and when they came they were in no condition to pass the proper examination, because they had been overworked. These men had not received any treatment. They had not received the consideration that they ought to receive, and still there are times when I do not know how that is avoidable, because they do not feel disposed to lay off from a trip or from their work a day or two to get thoroughly rested; but still, in a great many cases the evident weakness of vision or defect in color perception is largely due to overstrain or overwork, and they are not in proper condition to undergo a satisfactory examination. We all meet with cases of defective color perception in employees to be examined or re-examined, but much of it is due not so much to direct weakness as it is to absolute ignorance of what colors are; I have had applicants come to my office, off and on, and have asked them the color of a certain skein, and they will determine the color correctly at once, and then when they are asked to match or take all the skeins that contain that color, they will immediately go to work and try to match it with another shade. It is a difficult matter to so word our instructions to men who are wanting employment, that they will distinctly understand what we want them to do. If you give them the standard for the simplest green skein, and tell them you want the skeins that contain the green color, they will immediately pick out the shades which most nearly match the sample; you want the dark as well as the light. While a great many employees whom we examine develop a weak color perception, a good many others are simply color ignorant."

DR. JOHN E. OWENS, Chicago—I have been engaged in examining applicants for railroad service for a long time, and I still find some problems very difficult to solve satisfactorily. Not long since, I left Chicago at 6:30 in the evening, and returned the next morning at 8:30, having traveled 794 miles and remained 3½ hours in the town I visited. I say this to emphasize the importance of having men on our trains with normal color vision, on account of the great rapidity with which our trains run at the end of the nineteenth century. A mile a minute is common on many of our first-class railroads, not for the whole distance, but for many miles, and there has been such an advancement made in speed of trains, in equipment, in coaches, in trucks, and everything that pertains to the running of a train, that we certainly are beginning to see more and more the necessity of having men with normal physical endowments, normal functions, and particularly normal color sense to act as engineers. We have had a uniform system for some years on the Illinois Central, and the same system is in operation on the Northwestern. We go much further than examinations for visual defects and hearing. Physical aberrations which impair usefulness, which lengthen the time of disability or which lessen the powers of endurance of the physical strain during the running of fast trains are considered. I find a problem something like this to deal with: A new man reports for examination. He makes the characteristic mistakes of the color-blind and is rejected. He comes again for re-examination, and is again rejected, and even a third time. I have been inclined to be liberal with the men in examining them several

times, seven or eight days apart, to show them that I am disposed to do everything for them that is reasonable and right. A man with defective color sense will pick up the wrong skeins or point out the wrong colors. Others, after repeated examination and more or less outside practice, can key themselves up to pulling through, and the question arises: are we justified, under the circumstances, in passing them, or should they be rejected as the result of original characteristic errors? The latter is the course to be adopted.

When I first began to make examinations of employees on the Illinois Central, the Holmgren worsteds were used, and I was instructed by the general superintendent, as this was a new matter, to go over the road again and re-examine them. With assistance I accomplished it and examined the employees with flags and lanterns. I was a little timid about that part of it. I had every confidence in the Holmgren test for the detection of color sense, but I did not know what the men would do with flags and lanterns. I thought the Holmgren test would catch all, but I feared the other tests might let some slip through. We used flags in the day time and lanterns at night, and I was very much surprised to note the numerous mistakes that were made in naming the flags and lantern colors amongst those who had previously been found defective by the worsteds. The late Dr. Robert Tilley devised a little instrument which he used on a patient who was referred to an oculist, where he had examined the man and found him defective. This instrument was intended to bring out the personal equation in connection with such examinations. We did not bring it out to perfection. It was a domestic affair, but it corroborated the results of our previous examinations of certain men who were found defective in color sense.

DR. A. I. BOUFFLEUR, Chicago—The old statement that "a chain is no stronger than its weakest link" should be applied in examining men when tired. If a man is color-blind or color defective when he is tired, just after he has quit work, is he a safe man in a responsible position ten minutes before he has quit work? If we are to have perfect men on our railroads, it is best to test them when they are tired. I have to examine railroad employees in Chicago who run their trains by signals from the time they go out until they go off duty, and it is very essential that those men should be perfect in color sense at the close of their day's work, as it is at the commencement of it. I therefore take exception to that part of the Doctor's paper.

DR. J. T. ESKRIDGE, Denver, Colo.—I showed, in my paper, that hysteric subjects and neurasthenics commonly have limited fields of vision. I know not why it is, but in Colorado, particularly among railroad employees, neurasthenia is exceedingly common. I have examined eight or ten neurasthenics from the D. & R. G. Railroad this year, in whom the fields of vision were at first narrowed. It is evident that such men would not make good signal-men. I would like to ask the Fellows of the Academy if they have made any distinction in examining the eyes of railway employees, whether the patients were either "run down," neurasthenic, or hysteric? Those with manifestations of hysteria showed a decidedly contracted visual field.

DR. W. C. BANE, closing the discussion—As to the point brought out by Dr. Fulton, I agree with him that a man with one eye is disqualified for engine service, and unsafe for signal service. An old employee should be given other work.

As to the question raised by Dr. Eskridge in regard to neurasthenia and hysteria, I can only answer that in physical examination, the Rock Island surgeons include diseases of the Spine. The fields of vision are taken in the eye examinations.

The point with reference to men being tired at the time of examination should be carefully considered. A man at the end of his day's work ought to be able to recognize colors and see the signals quickly enough to protect himself and the passengers. The man who does not recognize colors promptly should not be employed for service where it is necessary to give and receive signals. Such men should be rejected.

I rode with an engineer on the Rock Island for a short distance in coming east, there being an electric headlight on the engine. He stated that for white and red the electric light was far superior to the ordinary light used on the engine, but he thought it was no improvement for green. I was impressed with the thought that the green lights as used on the railroads are not large enough.

THE EARLY DIAGNOSIS OF PULMONARY TUBERCULOSIS.*

BY EDWARD F. WELLS, M.D.

CHICAGO.

The history of pulmonary tuberculosis during the last quarter of the century now drawing to a close may be considered by the physician and humanitarian with a fair degree of complacency. The essential cause of the disease has been discovered; the avenues of infection have been located; promising methods of prevention have been formulated. The physician and the health officer are enthusiastic and alert to their duties and responsibilities, and they are guiding a public fairly intelligent and ready to accept the proffered advice; the malady is being discovered earlier, is probably being more effectively managed, and is declining in prevalence.

If one will but re-read the chapters on the diagnosis of pulmonary consumption, by Laennec, Louis, Andral, Copland, Watson, Eberle, Drake, Gerhard, Trousseau, Flint and Waldenburg—master minds of their day and certainly *au fait* with the literature and diagnostics of their generation—and compare them with the like chapters of Eichhorst, Osler, Anders, Kidd, Cornet and others of to-day, he can not fail to be profoundly impressed by the immense strides which have been made in the possibilities of the early diagnosis of this disease. This, however, only corresponds to my own observation and experience, and I know that appeal can safely be made to those of my hearers of my own age, or who are older, to confirm the statement that the early diagnoses of pulmonary tuberculosis which are now made as a routine, and which are demanded by the spirit of the times, were utterly unknown and unattainable a quarter of a century ago.

It may be admitted by many, and I will state as a proposition which I believe can not be successfully contradicted, that it is not only possible, but practicable as a matter of routine, to make very early diagnoses in cases of pulmonary tuberculosis. In making this statement I do not underestimate the difficulties, but I do feel confidence in the means at our command, and in the skill of medical men generally in their employment, for meeting and surmounting these obstacles. I am quite sure that diagnostic failures are not due to any inherent difficulties. On the contrary, they are usually due to remediable shortcomings on the part of the physician, as, for example, to a hazy conception of the clinical picture of early tuberculosis of the lungs; to obtaining an incomplete history of the case; to superficial physical examinations or to lack of facility in manipulation or interpretation in this field; and, finally, to a peculiar mental bias which renders him loath to acknowledge the presence of that which he dislikes to discover.

The practical importance of the earliest possible diagnosis of pulmonary tuberculosis can scarcely be overestimated—certainly it is patent to every physician. To the patient it means that he is the victim of a malady which will entail upon him, at the best, many months or years of invalidism, with, probably, radical modifications of business and domestic arrangements, together with a certainty of prolonged incapacity, and death in a majority of cases. On the other hand, complete recovery ensues in a very considerable proportion of cases—probably in from 25 to 35 per cent.—and a fairly comfortable existence may be had in another large contingent

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of cases which ultimately prove fatal. That the cure of the disease and extension of the life of the patient is largely dependent on the early institution of rational treatment, which presupposes early diagnosis, no one will have the temerity to deny.

To treat exhaustively of the early diagnosis of pulmonary tuberculosis would require a volume. It is clear, therefore, that within the limits of a short paper only a few of the more important points can be considered, even cursorily. It will be my aim, however, to select for comment those which are most apposite, most novel, and which are oftenest neglected.

Without argument it will be taken for granted that pulmonary tuberculosis is due to the lodgment and subsequent growth in the lungs of the bacillus tuberculosis; that the avenue of infection is usually through the inspiration of air which has been contaminated with the dried and pulverized sputa of consumptives; that the germs vary in virility and are inherently short-lived, especially in the light; that in countries where the malady is prevalent all persons are constantly exposed to the germs of the disease, and that some persons are infected because the inspired bacilli meet with present accidental conditions conducive to their growth and inherent or acquired slight powers of resistance, while the majority of persons escape because the germ encounters unfavorable local conditions and ample systemic defensive resources.

In the diagnosis of early and obscure cases it may be necessary to carefully weigh every circumstance which might possibly have any bearing on the probability, or improbability, of the presence of the disease in question. In such cases heredity and environment may be factors of the greatest importance. There can be no reasonable doubt that tubercular persons transmit to their descendants a peculiar and more or less profound susceptibility to the disease, as is proven by the persistency with which it clings, generation after generation, to those families in which it has once obtained a firm foothold. Known, and especially prolonged and extraordinary, exposure to the germs of the disease, or the absence of such exposure, must also be estimated at its true value in forming a diagnostic opinion. It will be readily understood that the chances of an obscure affection, presenting some of the features, but lacking in positive evidence of pulmonary tuberculosis, being in fact this disease are greatly increased in those who have family histories bristling with instances of the presence of this malady, or in those who are closely associated with consumptives who are careless in their habits. In this connection I can not too strongly urge upon family physicians the necessity of carefully examining such persons at regular, and not too infrequent, intervals. Pulmonary tuberculosis is more prevalent in some races, localities, and in connection with some occupations, etc., than in others. For these reasons heredity, susceptibility, immunity, environment, exposure, climate, occupation, residence, etc., should all be given due consideration in summing up the evidence in any given case.

Of special importance in the diagnosis of early pulmonary tuberculosis is a comprehensive and detailed medical history of the case, although the obtaining of this is often a most difficult professional feat. Patients have no desire to withhold needed information or to make wilful misstatements, yet some of the most suggestive of the early symptoms they may consider insignificant and unworthy of mention, or they may not have noticed them. However, careful and methodical questioning, especially in the presence of an observing associate, will, ordinarily, elicit a fairly clear, and it may be a graphic, description of the early symptoms of the disease. Upon this feature I lay particular stress, inasmuch as long observation in a field of practice peculiarly suited for obtaining exact information has convinced me that, ordinarily, the access of pulmonary tuberculosis is marked by great uniformity of symptomatology.

I can not recognize a "pretubercular stage" of the disease. I do not lose sight of the fact that the disease is often preceded by anemia, gastric and intestinal disorders, etc., but the existence of such conditions, although they may invite infection, are purely accidental and are not necessarily premonitory. The beginning of the attack must be coincident with the implantation and parasitic development of the bacillus of tuberculosis.

The symptomatic development of pulmonary tuberculosis in a typical case may be briefly outlined as follows: There is a slight and unobtrusive cough which insidiously increases in force and frequency; after a few weeks there appears a scanty mucous expectoration, later, becoming mucopurulent and more abundant; there may be hoarseness, hemoptysis and thoracic soreness; there is slight or moderate afternoon fever, which is accentuated by exercise; the pulse is increased in frequency and arterial tension is diminished; the appetite is lessened, nutrition fails and there is loss of weight, strength and endurance. About once in from four to six weeks there is an exacerbation in which all these symptoms are accentuated and some new ones are added: The cough is increased in frequency, is dry and is often accompanied by thoracic soreness or pain; the fever rises higher in the evening and is usually also present in the morning; the head aches, and there are general aching pains; the appetite is poor and the bowels are constipated; weight is rapidly lost and there is marked weakness; the patient is restless, irritable and out of sorts generally. After about a week freer expectoration occurs; the skin becomes moist; the appetite returns and the bowels move naturally; the soreness and aching cease and the patient feels better. These exacerbations recur at intervals of from four to six weeks, each succeeding one becoming more pronounced, and their diagnostic value can not be readily overestimated.

Let us now consider some of these symptoms more fully:

Cough is probably the earliest symptom. It has, moreover, peculiar characteristics. It is slight, unobtrusive, hacking and often consists of a single effort. It may be excited by change of posture, deep breathing, etc., but if the movement or forced inspiration be repeated the cough may not be reproduced. Usually it is infrequent and may not be heard a half dozen times a day, and may be unnoticed by the patient and his associates. Later, and especially during the morbid exacerbations, it increases in frequency and severity, is provoked by changes of posture, sudden exertion, deep breathing, etc., and each repetition of the provocative act is followed by cough. Later it may assume a paroxysmal character and may be accompanied by vomiting. Cough, as above described, and gradually assuming more and more prominence as time passes, is highly suggestive of pulmonary tuberculosis. If hoarseness is also present the chances that the affection is of any other nature are very slight indeed.

Expectoration may be scanty and for a time free from the specific germ and the evidences of ulcerative action. However, if search is made for bacilli and elastic fibers immediately after one of the febrile exacerbations referred to it will usually be rewarded by the discovery of these, practically, indubitable evidences of the disease in question. Boiling the sputum, just long enough, with a caustic alkali, and centrifuging it, increases the chance of finding the bacilli and fibers if sparingly present.

Hemoptysis occurs in only a moderate proportion of the cases of early pulmonary tuberculosis, but it is very significant when it does appear and is a symptom of prime importance. It is usually small, or moderate, and solitary or mildly persistent for several hours, or recurrent. Although a period of cough and one or more febrile attacks will almost certainly have preceded the hemoptysis, yet the spitting of blood is often the first symptom to excite the alarm of the patient and his friends.

Thoracic tenderness, soreness and pain are rarely absent in early—not the earliest—pulmonary tuberculosis. Their favorite location is in the upper part of the chest, in front, although they may be seated in the axilla or back, or even at the base. Their location and character are often indefinite, but this indefiniteness is in itself a suspicious circumstance.

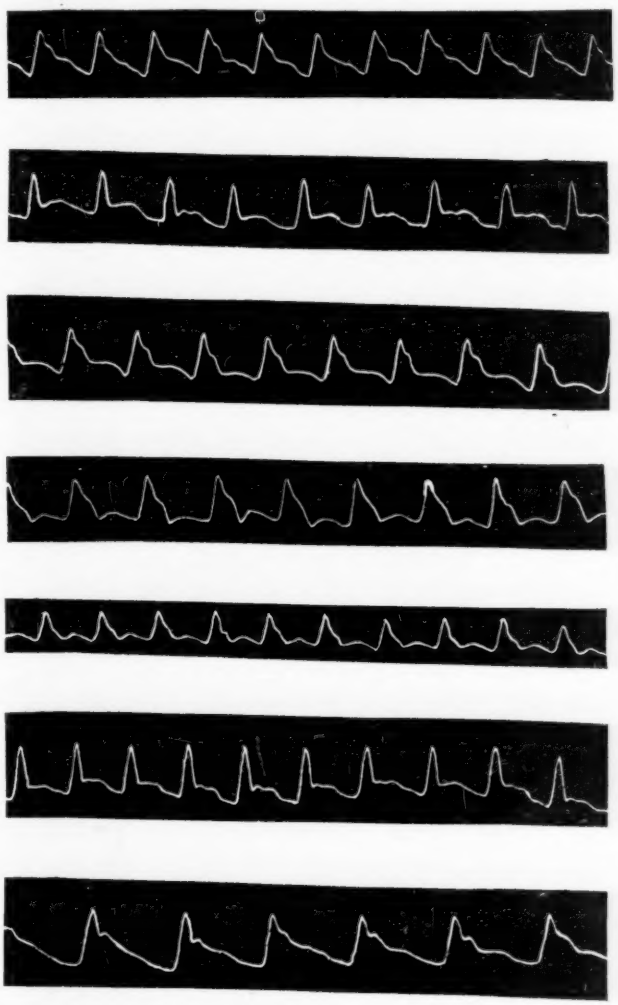
The *fever* curve of early pulmonary tuberculosis is highly diagnostic, and frequent, methodical thermometric observations for several days will clear up many a doubtful case. The temperature in the morning may be normal, subnormal or very slightly elevated. In the afternoon it may range between 100 and 103 F., the highest temperature occurring in the late afternoon rather than in the evening. An important fact is that exertion promptly and decidedly increases the temperature. During the febrile exacerbations the range of temperature is greater, and the type of fever is remittent rather than intermittent. Some other affections, e.g., anemia, obscure suppurations, etc., may be accompanied by evening elevation of temperature, but these are usually readily differentiated.

Gastric symptoms are frequently present. The appetite is somewhat impaired and may be erratic, while in infrequent cases there is a veritable dyspepsia. In rare cases there are no gastric disturbances. During the febrile exacerbations the appetite fails, the tongue becomes coated, the bowels are confined and there may be nausea and vomiting. So marked are these symptoms that these exacerbations are often considered "bilious attacks," with failure in recognizing their true nature.

Nutrition is impaired, and weight, strength and endurance are early diminished, especially during the febrile attacks, each exacerbation leaving the patient on a slightly lower plane. The patient may have the appearance of health, but an appeal to the scales will show a loss of weight and it will be found that feats of strength and endurance which could be formerly accomplished with ease can not be duplicated, or are only possible with difficulty and added exertion. The patient tires easily and unaccountably, and this symptom usually early attracts his notice.

The *blood* is early altered in composition. The number of red blood-corpuscles is diminished, as is also the specific gravity and hemoglobin. It is contaminated by the presence of tubercular toxins and, perhaps, antitoxins, and by an excess of waste products. There are probably morphologic changes in the erythrocytes and leucocytes.

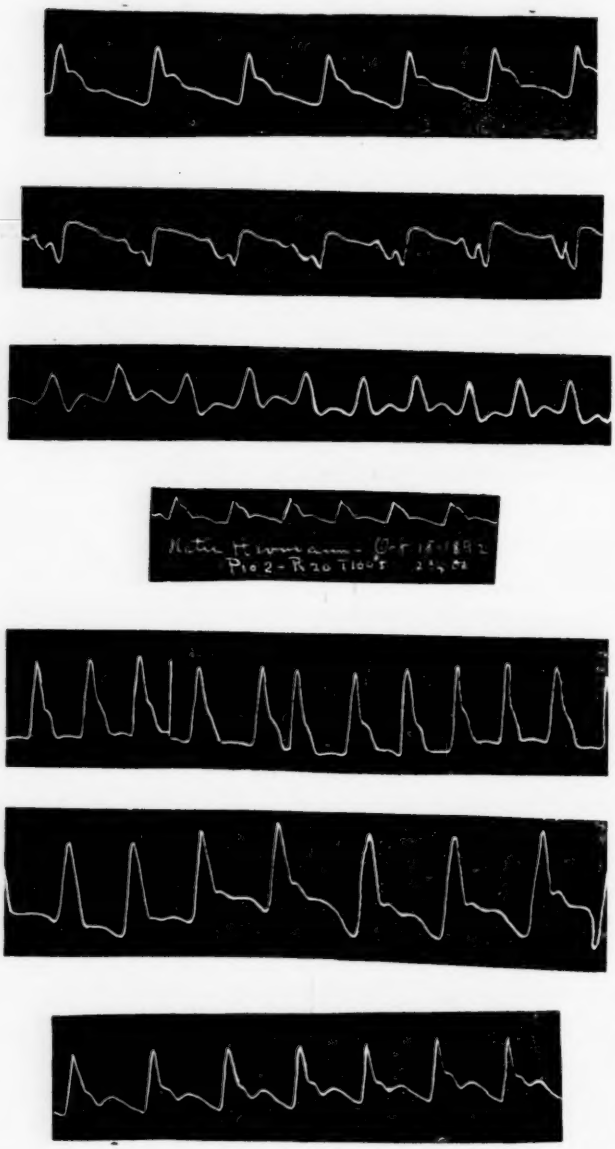
The *pulse* is early and decidedly modified in its character. It is usually accelerated, and the rate is changed but little by position. This latter feature is very suggestive, and whenever the pulse-rate is found increased and practically the same whether the patient is lying, sitting or standing, the most careful scrutiny is demanded. The acceleration is usually moderate, but in rare instances it may be very great. The arterial tension is early and notably reduced, especially during the febrile exacerbations. To this, in my experience, I have met with no exception. Normal or an increased tension may be present when the disease attacks persons with arteriosclerosis, but I have had no opportunities for studying such cases.



Sphygmographic tracings give most valuable aid in the diagnosis of early pulmonary tuberculosis, and from these alone the scale may be turned in the great majority of doubtful cases. Typically the tracings show a pulse of lowered tension and infantile character—a small and frequent pulse. From this typical curve there are infinite variations in both directions, approaching the normal on the one hand and reaching the most pronounced dicrotism on the other. Words can convey no adequate conception of these changes, and I can only append a number of examples, with the assurance that you will be convinced that we have in the early stages of this affection a distinctive and readily recognizable pulse.

To some I may have been somewhat tedious in my preceding remarks. I can only offer, in apology, my conviction that those points are of primary importance and that they must be fully appreciated and recognized when we come to interrogate the chest by the aid of the percussor and the stethoscope. The importance of a most painstaking physical examination of the chest needs no extended mention. However, those who have had the greatest experience well know that, at the stage of the disease to which my remarks refer, physical signs are often in abeyance or are capable of various interpretations. Localized râles may mean much or little, as they may be heard in a patient with or without the symptoms detailed. It must also be borne in mind that in some cases the progress of the pulmonary affection is slow; and that in these cases symptoms may antedate by several months the appearance of demonstrable signs.

Percussion may elicit diminished resonance or dulness



in some early cases which are rapidly progressive, but as a rule this will not be found in the doubtful cases. Stethoscopic percussion may be an aid. I have thought that during the febrile exacerbations areas of dulness could be detected which did not exist before nor persist after, but on this point my conclusions are indefinite. I am sure, however, that areas of pre-existing dulness are enlarged at these times. It must be borne in mind that, whereas distinct interscapular, supra- or infraclavicular dulness is highly suggestive of tubercular consolidation of the lung, the converse does not hold good, as tubercular formation may be present without any impairment of the percussion note.

In *auscultation* it is scarcely possible to overestimate the diagnostic importance of localized crepitation, moist râles, and prolonged, high-pitched expiration, heard, especially between the scapula and the spine, at the apex, or below the clavicle. Fine crepitation and coarse râles may be heard more distinctly, or only on deep inspiration, or with, or after, coughing. All the auscultatory signs are more noticeable during or shortly after a febrile exacerbation. Moist râles are rendered more prominent, or they may be heard only after an iodid has been given in moderate doses for a few days. The iodid causes a flow of serum from the bronchial mucous membranes, and this serum is not readily extruded from consolidated areas. Under these circumstances coughing, deep breathing, or even ordinary respiration will produce râles in these areas. It does not aid in the diagnosis of cases which have not progressed to the stage of some consolidation, except that it may favor the expectoration of bacilli bearing sputum. Some observations upon the use of iodid of potassium in the early diagnosis and the locating of the local lesion in pulmonary tuberculosis I brought to notice a year ago. Since my report I have employed it in every suitable case which has presented itself, and I can only reaffirm what I then said, namely, that in iodid of potassium we have a valuable diagnostic agent.

The *tuberculin test* may be employed in those cases, not syphilitic nor chlorotic, in which the diagnosis can not be made by ordinary means and in which a moderate delay can not be had. Although a valuable diagnostic agent its use is attended with a slight risk and, therefore, tuberculin should be administered only in such manner as to furnish profitable information. The temperature should be normal or have a very low febrile range and thermometric observations should be made and recorded every three hours for several days before the tuberculin is injected. The dose should be a moderate one, say from three to five milligrams, and it should be given in the evening in order that the reaction may begin in the morning. A positive reaction may be considered to have taken place if the malaise, headache, backache and pains in the legs have been marked and the temperature decidedly elevated. The reaction usually begins in about twelve hours and continues for from thirty-six to forty-eight hours. If no reaction follows the injection a larger dose, but not exceeding one centigram, should be given after the lapse of several days. In the tuberculin test a negative result is of great importance, because, if the observations have been carefully made, we may affirm that not only is the suspected pulmonary affection not tubercular but that there are no latent pulmonary foci and that tuberculosis does not exist in other parts of the body.

In a doubtful case the X-ray may tip the balance for or against the probability of tuberculosis being present. This is especially true when thoracic soreness or pain is present, the X-ray revealing restricted movement of the diaphragm upon the affected side.

In conclusion, I will say: Satisfactory diagnoses in cases of early pulmonary tuberculosis can be made only on a broad base of practical knowledge. It must be apparent that it is impossible to compress in a short ad-

dress that which many volumes can not contain. It is believed, however, that sufficient has been presented to lead to the conclusion that the early diagnosis of the affection under consideration presents no insurmountable difficulties, and that the application of a reasonable amount of care and skill, and in a few cases allowing the lapse of a little time, will almost invariably lead to correct results. In attaining these ends no portion of our experience concerning pulmonary tuberculosis can be neglected, but particular attention should be given the points mentioned.

4571 Lake Avenue.

THE SIGHT AND HEARING OF SCHOOL CHILDREN.*

BY H. V. WURDEMANN, M.D.

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MILWAUKEE, WIS.

WITH THE COLLABORATION OF

FRANK ALLPORT, M.D.

Professor of Ophthalmology, Chicago Policlinic; Professor of Ophthalmology and Otology, Northwestern Woman's Medical College; Oculist and Aurist to St. Luke's Hospital, Consulting Oculist and Aurist to St. Joseph's Hospital.

CHICAGO.

I have been requested by the superintendent of the Milwaukee schools to say something concerning methods for the systematic examination of school children's vision and hearing, which have been instituted in a number of the large cities of America, and have been taken up in this city under the authority of the commissioner of public health.

The enlightenment of the young may be likened to the raising of agricultural products. Not only are proper seeds necessary, but favorable soil and conditions are quite as needful. The means of education: the buildings, properly placed, constructed and conducted, including teachers, systems, books, etc., have been fully developed in our day. The child's mind should be active and its body and senses healthy to render it capable of profiting by instruction. Modern schools, with their effective machinery, are a source of gratification and delight to all; but enthusiastic, progressive and systematic educators do not always consider the soil on which the seed of enlightenment falls; in other words they are disposed to consider children as a massed entity, do not separate them into isolated individuals, with distinct inheritances, and mental and physical peculiarities, rendering them more or less adaptable to the requirements of the modern public school. Children are thrown into the great machinery of school life, are divided into grades, are expected to adhere to them and become educated according to this system. A child may have a weak or crooked back, which will become aggravated by close confinement at improperly constructed desks; he may have lungs handicapped with the incipient germs of consumption, encouraged by the protracted inhalation of vitiated school air; he may languish from an impoverished condition of the blood, and pine and droop under too much study and too little fresh air.

These are some of the conditions noticed in school children, militating against the easy acquirement of an education; but more directly detrimental is the existence of certain abnormal conditions of the organs of special sense, of *seeing* and *hearing*, which are certainly of prime importance in acquiring an education. If a child can not see well and hear well his position is certainly most unfortunate in the modern public school, where he is expected to keep up with his grade work, or else subject himself to chagrin and mortification. Do not understand me as saying that your schools are to be likened to the car of Juggernaut, that ruthlessly throws down and crushes all who unfortunately come in contact with its destroying wheels. Far from it. I fully appreciate the gentle, humane and sympathetic feelings that proceed from the hearts of most teachers toward the children committed to their care. I am not unaware of their watchfulness and solicitude over their little flock, that prompts them to change the seats of the deaf and nearsighted, to make allowances for any noticeable physical or mental short-comings, to frequently visit parents and urge on them the necessity of action concerning the health of a child; but these are isolated though frequent instances, inspired by individual sympathy and character.

What we want is a paternal school system of health investigation, by which the physical defects of children will be made manifest and steps taken to protect pupils against themselves and in many instances against their parents. We also want a system that, after these unfortunate conditions have been discovered, will not only allow, but insist on, the harmonizing of the studies to the child, and not the child to the studies. I am not unaware of how often this is done; that the doctor's certificate of poor health is usually respected; that the course of study is sometimes changed under the advice of parents or teacher. I think I am not wrong in saying that these changes are so frequent, and so little encouraged, that children will often endure much physical discomfort or even suffering, rather than assume the mortification brought on them by the distinction of a grade change. These changes should be inspired from the intelligent illumination of regular physical examinations, and should be so common as to excite no comment, and give rise to no loss of a pupil's self-respect, or disappointment on the part of the parent, who frequently allows a child to languish and acquire permanent invalidism, rather than interfere with his class standing, or the date of a projected graduation.

I would not be misunderstood as advocating the abolition of systems and grades. It is needless to say that schools can not be properly conducted on other principles. Neither do I advocate the indiscriminate changing of children in grades, without just and adequate consideration. Neither do I ignore the fact that pupils are frequently changed to other grades for ostensibly good and sufficient reasons. I advocate more system and more grades. I advocate a system of physical examination in schools, by which we may know the condition of a child's health, and not trust chance or circumstances to detect it, and I advocate more and shifting grades, commensurate with the physical condition of defective children. In other words, I do not believe in the wholesale education of the rising generation, which is our country's hope, its bulwark and defense, and whose physical and mental condition is a sacred trust which we must guard and cherish. I do not believe in thrusting these little, yielding, impressionable, often sickly, lives into the common crucible, to be moulded and turned out with identical exactitude and precision. I believe that children should not be damaged by their educational existence, but should emerge from the portals of the Amer-

*An Address delivered before the Principals of the Milwaukee Public Schools, Jan. 12, 1900.

ican public school in better physical, mental and, may I say, moral condition than when they were entrusted to its fostering care, and that steps should be taken calculated to bring about the fulfilment of this imperative duty.

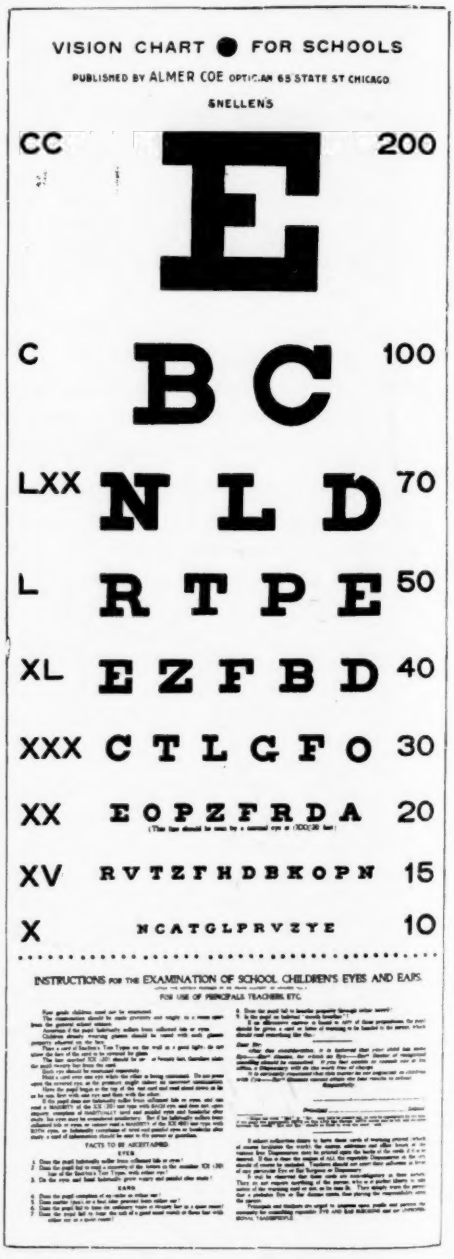
We must creep before we walk, and a great reform of this kind can not be accomplished without primitive and pioneer work. The eye is the most important physical element in the acquirement of an education, unless it be the brain, and is fortunately an organ capable of ready examination. The testing of school children's eyes has been systematically performed for many years in Europe, and especially in Germany—that factory of bad eyes—and, since 1895, somewhat in this country, but these examinations have been made by oculists appointed by school authorities, who have personally—with their assistants—examined every child in a given community. This system operated very well in monarchical Europe, accustomed to arbitrary domination, but in America, habituated to democratic rule and individual freeedom, the method has given rise to much opposition from parents, children, school authorities and other oculists wherever tried. In fact, the method has been forcibly discontinued, as an element of too much discord and professional strife. Teachers have, sometimes, in a spirit of righteous investigation, made abortive attempts at testing their school children's eyes in various more or less scientific fashions, being forced by intelligent observation to a realization of the truth that many children were struggling under an ocular burden, very heavy to carry.

A systematic method for the examination of pupils' eyes by teachers, comprising simple questions and instructions which, if properly carried out, will detect the existence of most important ocular diseases, has been in use in Minneapolis and St. Paul; Worcester, Mass.; Sycamore, Ill.; Philadelphia and Chicago, for several years, and is being introduced in San Francisco and other cities.

Statistics show the average frequency of defective eyes in American school children to range from 25 to 35 per cent. When it is remembered that the vast majority of these have never sought ophthalmic advice, and are therefore endeavoring to acquire an education under exceedingly disadvantageous circumstances, the importance of this subject can be imagined. Time forbids me to enter into any description of the ocular diseases and conditions chiefly incidental to school life, but you doubtless know that nearsightedness or myopia is quite frequently a development caused by excessive study under poor conditions; that hyperopia and astigmatism are malformations of the eyeball, rendering study exceedingly irksome, because of tired eyes and head and headache; that a cataract is an opacity of the crystalline lens, and may exist and partly blind a child, without recognition, except by skilful examination; that optic nerve, choroidal and retinal inflammations may occur without especially noticeable symptoms to an observant child; that many varieties of "sore eyes" may hinder even reasonable school diligence; in short, that many morbid ocular conditions may obtain without attracting especial attention, and render the acquirement of an education exceedingly burdensome to children who thereby acquire the reputation of being dull, stupid and idle, but whose unenviable record may be completely revolutionized by proper ocular treatment and advice. The same may be said of aural diseases or conditions attended by deafness.

These are the children we hope to reach by these school tests, and especially those poor and almost abandoned children, whose parents are ignorant, careless and indifferent to the physical conditions of their offspring. These eye tests are now quite generally recognized as being the best practical solution of the question as to how to place children in the proper channel to secure relief from ocular complaints, and as the idea is firmly established, we think that the time is rife for another advance in the physical examination of the children.

Many children suffer from nasal obstructions and particularly from enlargement and engorgement of the



tissues in the upper part of the pharynx and throat. Such obstructions prevent free nasal breathing and cause a utilization of the mouth for this purpose, besides giving rise to deafness, on account of a lack of proper aeration of the middle ear through the Eustachian tubes, leading from the upper portion of the throat to the ear. These enlargements in the pharynx, called "adenoid growths or vegetations," are productive of a large majority of the chronic ear diseases from which children suffer. Fortunately they can be easily removed, and some of the most satisfactory surgical work ever witnessed follows such operations. These children, called "mouth breath-

ers," present a peculiarly dull and stupid appearance which is aggravated by the almost invariably accompanying deafness. Removal of the growths and proper treatment to the ears completely revolutionize the appearance and character of the child, and if you have ever observed such physical and mental transformations, you will never forget them, nor fail to emphasize the importance of such work.

One important matter should be remembered in these tests, viz.: They are not conducted solely for the purpose of detecting ocular conditions requiring the use of glasses. Many seem to have the idea that they simply detect errors of refraction, but such is not the case, as they will, if properly carried out, detect the existence of almost all serious ocular diseases or conditions. The teacher does not know what disease is present, but that something is wrong; that is sufficient. The sole idea in the tests is to separate those children having good eyes and ears from the defectives. These tests should be made at the beginning of the school year, statistical reports prepared and reports of the defectives again made at the end of the school year. Those passing the tests successfully are returned to school and not re-examined for one year, when they should undergo another examination, as morbid conditions may have developed meanwhile. Those having defective eyes or ears are simply given a card of warning, which they hand to the parent. This card merely states that some eye or ear disease is believed to exist, and the consulting of a physician, therefore, is advised. The matter is not compulsory, as the parent may do as he thinks best; he may consult any physician or dispensary he chooses. In this way the duty is thrown on the shoulders of the parent, where it belongs, but if compliance with the advice is not observed, the teacher may from time to time urge the matter with tact and delicacy, but nothing should be said to make the parents regard the matter as an arbitrary demand.

Many teachers outside of large cities are interested in this work, and are constantly inquiring how they may do it in places where a board has taken no official action along these lines. They may purchase one of these combination charts[1] for twenty-five cents, containing both the test-types and instructions, and proceed with the work in their room or school. To this there can certainly be no objection, as the tests are absolutely harmless in every particular.

In Minneapolis and Chicago, where these examinations were most complete, we know positively that thousands of children were much benefited by these proceedings. Cataracts were removed, cross-eyes straightened, intraocular inflammation relieved, glasses were fitted, etc.; in short, the tests have really been exceedingly beneficent in their results, and while some opposition from parents and teachers was at first encountered, nothing but commendation can now be heard from all sources.

For the Milwaukee tests the commissioner of public health and the superintendent of public schools have authorized me to design a plan for this investigation, embodying the best features from the experience of other cities. To this means I have secured the collaboration of other oculists, Drs. Charles Zimmermann, J. S. Barnes and N. M. Black, who, with myself will at appointed times instruct the grade teachers in the anatomic and physiologic relations of the eye and ear so far as may aid in these investigations, and will also instruct them in the methods of examination and keeping what records may be needed by actual demonstrations on teachers or pupils at these meetings. The tests and records will be made by the teachers for each grade, under the supervision of the principals of the school. The number of children examined should be noted, but only complete records of the defectives are to be made, which are to be done in duplicate by the room teachers and both copies sent to the principals, one copy to be kept by the principals and the other sent to my address. The cards of warning are to be filled in and sent by the principals to the parents of any child found defective. At the end of the school year the principals are to fill out the duplicate reports, stating whether or not the pupil has profited by the card of warning to its parents, and the results, as well as his impression of the usefulness of such an examination in his school. This duplicate is then to be sent to my address for use in the preparation of a report to the school board.

A compound test-card, based on the standard types of Snellen, has been designed by Dr. Frank Allport—"The Visual and Aural Chart for Schools"—and will be used in the Milwaukee examinations. Roman numerals are on one side of each line and Arabic on the other. Under the twenty-foot line are these words: "This line should be seen by a normal eye at 20 (XX) feet," and would seem to make the matter sufficiently plain. Under the ten-foot line, on the card proper, is a half-broken line at which the lower portion of the compound card should be severed from the upper portion. Just under this line are printed the words: "Please detach by breaking on this line."

The card which is thus detached contains the teacher's instructions as to how to proceed with the tests. The upper or long card containing Snellen's types is the testing card, and should be hung on the wall when in use. On the lower card of instructions is printed the following matter, most of which is already familiar to those who have used this method:

TEST CHART.

Instructions for the Examination of School Children's Eyes and Ears. For Use of Principals and Teachers. After the Method proposed by Dr. Frank Allport of Chicago, Ill.:

First grade children need not be examined.

The examination should be made privately and singly, in a room apart from the general school session.

Ascertain if the pupil habitually suffers from inflamed lids or eyes.

Children already wearing glasses should be tested with such glasses properly adjusted on the face.

Place a card of Snellen's test types on the wall in a good light; do not allow the face of the card to be covered by glass.

The line marked XX (20) should be seen at twenty feet, therefore place the pupil twenty feet from the card.

Each eye should be examined separately.

Hold a card over one eye while the other is being examined. Do not press upon the covered eye, as the pressure might induce an incorrect examination.

Have the pupil begin at the top of the test card and read aloud down as far as he can, first with one eye and then with the other.

If the pupil does not habitually suffer from inflamed lids or eyes, and can read a *majority* of the XX(20) test type with *each* eye, and does not, upon inquiry, complain of *habitually* tired and painful eyes and headache after study, his eyes may be considered satisfactory. But if he habitually suffers from inflamed lids or eyes, or can not read a *majority* of the XX(20) test type with *both* eyes, or habitually complains of tired and painful eyes or headache after study, a card of information should be sent to the parent or guardian.

FACTS TO BE ASCERTAINED.

EYES.

1. Does the pupil habitually suffer from inflamed lids or eyes?

[1] Vision Charts for Schools; published by Almer Coe, 65 State St., Chicago.

2. Does the pupil fail to read a majority of the letters in the number XX (20) line of the Snellen's test type with either eye.?

3. Do the eyes and head habitually become weary and painful after study?

4. Is the pupil probably cross-eyed?

EARS.

5. Does the pupil complain of ear-ache in either ear?

6. Does matter (pus) or a foul odor proceed from either ear?

7. Does the pupil fail to hear an ordinary voice at twenty feet in a quiet room?

8. Does the pupil fail to hear the tick of a good-sized watch at three feet, with either ear, in a quiet room?

9. Does the pupil fail to breathe properly through either nostril?

10. Is the pupil an habitual "mouth breather"?

If an affirmative answer is found to *any* of these propositions the pupil should be given a card or letter of warning to be handed to the parent, which should read something like this:

Dear Sir: After due consideration, it is believed that your child has some eye—ear disease, for which an eye—ear doctor of recognized standing should be consulted.

It is earnestly requested that this matter be not neglected, as children with eye—ear diseases can not attain the best results in school

Respectfully.....

Principal.....School

Either the word "eye" or "ear" may here be crossed out, as may be appropriate for the case. If the pupil has presumably *both* an eye and ear disease, *both* words may be left, and the space between the words "eye" and "ear" should be filled with the words "and".

It will be observed that these cards are non-obligatory in their nature. They do not require anything of the parent, who is at perfect liberty to take notice of the warning card or not as he sees fit. They simply warn the parent that a probable eye or ear disease exists, thus placing the responsibility upon the parent.

These instructions are repeated in the tabulated reports, and in addition instructions for ear examination as follows:

In a room apart from the general school session examine the pupils singly, ascertaining if the pupil complains of ear-ache, if matter (pus) or a foul odor proceeds from either ear, if the pupil fails to breathe freely through either nostril or if he breathes mostly through his mouth. Have the child turn his back, an assistant plugging up the left ear with a cloth over the finger. The examiner steps away about 20 feet, asks the child a direct question in a low but distinct voice requiring a direct answer. The right ear is then to be stopped and the left ear tested. If after several questions the child fails to hear the spoken words and answers incorrectly he is deemed defective. A good-sized watch is held about six feet away and gradually moved toward the ear to be tested and distance at which the subject says he hears the tick is noted. It should be heard at least three feet away from the ear. If the pupil fails to hear spoken words or the tick of the watch as above noted, if he complains of ear-ache, if pus or a foul odor is observed from either ear, if his nose is habitually stopped or if he is a mouth breather, his name and a detailed report should be entered below on this sheet by the teacher, and a card of information sent by the principal to the parent or guardian.

General suggestions and instructions are likewise found on the tabulated reports as follows:

Examine your entire school by these methods at the beginning of the school year; part of the pupils each day, so as not to interfere with the regular course of instruction. Examine each new pupil entering between beginning and end of terms. Only such pupils as are thought necessary to send to an eye or ear physician need tabulation on this blank. This sheet is to be filled in duplicate, both copies sent to your principal, one copy of which is to be sent as soon as you have completed the examination of the school to the commissioner of Health for Milwaukee. The other is to be held until the end of the school term by the principal, who will then send the duplicate copy to this address, noting thereon in the two last columns, whether the pupil consulted a physician, or if not, why; describing the results of treatment, particularly as regards the pupil's conduct, health and application to study.

One of the chief obstacles to satisfactory results in Minneapolis and Chicago was the fact that many parents took their children to jewelers and opticians instead of oculists. The cities were flooded with fulsome advertisements, and circulars from opticians and spectacle peddlers to teachers, parents and physicians soliciting their trade and influence.

This preliminary examination is not proposed simply for the purpose of ascertaining the need of glasses, but in hopes of disclosing existence of almost all ocular diseases. The eye is not merely a mechanical apparatus which, if out of order, requires for its correction a pair of glasses. A good medical education is absolutely essential for the diagnosis and treatment of astigmatism, hyperopia, myopia and imbalance of the ocular muscles; the former of which are malformations, and the latter diseases, which, in many cases, need something else than the placing of lenses before the eye as well, for cure of inflammation and work of a surgical nature.

Principals and teachers are, therefore, urged to impress upon pupils and parents the necessity for consulting reputable eye and ear doctors and not unprofessional tradespeople.

SPECIAL ARTICLE.

RELATIONS OF PHARMACY TO THE MEDICAL PROFESSION.

III.

It has been shown that confusion existing in the lay mind, and largely shared by the medical profession, concerning the so-called "patent medicines" for domestic use, is due to the popular incorrect use of the term "patent" to indicate that an article is afforded such protection as rests on priority of registration of a name for the article as a trademark, or through copyright including this. It does not mean the article is protected through letters patent issued on the process of manufacture, or on the composition of the article itself. It has also been shown that a patent is very rarely granted on the combination, or mixtures of various ingredients, or on the process of producing any medicinal preparation or mixture, if for no other reason from the fact that in the vast majority of instances it would be impossible to show any originality, improvement, or invention, even to the often limited extent necessary to satisfy the patent office requirements; hence the almost general reliance on the trade-mark laws, for protection in medicinal articles.

As has already been pointed out, it is not the intent of the trade-mark law to afford protection to the *name* of an article, but simply through its registration record priority in case of contention over a device, symbol, sign, or figure to distinguish a certain "brand" of manufactures from all other brands.

It is the evident intent of the trade-mark law to protect a manufacturer through some design of his own invention, which must be arbitrarily selected, or, as it is termed, "fanciful," and in the case of a name it must therefore not be descriptive, i. e., too closely simulate the name of any natural substance, mineral, plant, or animal, or geographic name, or that of any well-defined physical, chemical, physiologic process or mechanical or therapeutic uses. That this is a subject of difficult interpretation is self-evident, and the registration by

* The third of a series of articles to appear weekly in THE JOURNAL, designed to correct the abuses from advertising and patronizing pharmaceutical specialties.

different parties, often unwittingly, of names identical or nearly so, has caused endless litigation. Sometimes the difference of a single letter in the termination of a word, as for example, "digestin" and "digestine," applied to different products of different manufacturers, has caused annoyance and confusion. The most interesting illustrations of this character are the adjective derivatives—bromo, chloro, phospho, pepto—joined or hyphenated to some substantive or base, such as caffein, alum, quinin, mangan, etc. Such compound words have been held as valid trade-marks, and yet they are as nearly descriptive of the articles as any titles could possibly be. "Bromo-seltzer" comes in this category, and yet the name as a trade-mark could probably not be bought for a million dollars! The official nomenclature of the Pharmacopeia may decide what form of termination should be regarded as descriptive, but since the termination "ine," of a generic plant name, for example, stands for the alkaloid of the plant named, the application of this system to the present trade-mark names would cause a surfeit of active principles of as nondescript a collection of medicinal agents as ever graced the apothecary shop, so vividly portrayed by the "bard of Avon." "Heroine," for example, would under the definition become the alkaloid of "hero," and the active principles of the "great fathers" of antiseptic surgery would be ever with us in their "spirits."

CONFUSION OF NAMES.

Much could be said concerning the necessity from the medical standpoint, and especially from that of the prescriber, for a radical change in the system—or lack of system—in vogue for naming medicines. Scarcely a day passes but some new article appears under some fanciful name. The possibilities of the English language are great, but they will soon be exhausted, as the medical and pharmaceutical terms already are, and well-nigh also the dead languages.

So nearly similar terms are bestowed, often on widely differing articles, that, aside from the resultant confusion, there is great danger from serious error. A few illustrations will suffice: "Lactated Mercury" was a name given to a trituration of calomel. On a physician's prescription for this, lactate of mercury, a very potent mercury compound was dispensed.

In another instance a prescription was written for "mercurol," m. 10, water, fℨ iv, for an injection. For "mercurol," written illegibly and too recent an addition to be known to the pharmacist, "mercauro" was dispensed instead; and yet the pharmacist can scarcely be blamed—"the pace is getting too swift for him" as well as for the physician.

It is for these reasons, among others, that the use of the names of the article as trade-marks is so objectionable and, in fact, so unreliable that manufacturers wholly familiar with the situation have abandoned reliance on such except when joined with a proper name. The possessive name of a person, especially of the manufacturer, joined with the name of the preparation, is fairly indicative of identity of brand, though not invariably so, as demonstrated in the celebrated cases of "Hoyt's Cologne" and "Brown's Essence of Ginger," the original makers in both instances failing to estop these manufactures by persons of these respective family names.

THE TRUE POSITION.

The very best authorities on trade-mark law at the present time, however, are unequivocally of the opinion that the name of an article can not be maintained as a trade-mark; that such use would give to the trade-mark a power not only not contemplated, but expressly interdicted by the law; that a monopoly of the manufacture of an article must rest on proven originality, invention or improvement, neither of which qualities are inherent in simply the naming of an article; in short, that if the article itself is really valuable, then the invention is entitled to a limited monopoly through patent on the article itself, the preparation, compound or mixture, or on the process of manufacture. Not to be satisfied with a limited protection expiring through limitation granted for a valuable discovery, but to seek unlimited protection—eternal monopoly—on an article unworthy of the few years of protection invested by the letters patent, is a travesty of justice and an absurdity. The justice is therefore apparent of the demand on Congress, by the National Association of Retail Druggists, submitted to the trade-mark and patent laws, revision committee, appointed by President McKinley, at its recent sitting in Chicago, that the laws should be amended so as "to prohibit the registration of names, combination of names coined or otherwise, and that such registration be confined to brands, symbols, signs and devices." This action is in line with that of the American Pharmaceutical Association, last year, in defining the status of medicinal articles for introduction into the U. S. Pharmacopeia, presented through its delegates to the Convention for Revising the Pharmacopeia in Washington, D. C., May 2.

EXTERNAL MEDICINAL AGENTS.

This class comprises all medicinal articles intended for external use; absorbents, antiseptics, astringents, deodorants, disinfectants, protectives, etc., and includes the following pharmaceutic forms:

1. Simple solutions—examples: formalin, hydrogen dioxid solution, hydrozone, glycozone.
2. Compound solutions or mixtures—examples: alphasol, eucaform, glycothymolin, listerin, bromochloralum.
3. Semiliquid mixtures—non-fatty: lubrichondrin.
4. Semisolids—non-fatty: antiphlogistin, anhydrosin. Fatty —ointments: lyptol, unguentin, vasogen; suppositories, protargol bougies.
5. Plasters, surgical dressings, soap, ligatures.
6. Powders, antiseptic powder.
7. Chemicals of definite composition: nosophen, eudoxin, etc.

In all of the above examples, only the two first mentioned have truly descriptive names, all the remainder having more or less fanciful or suggestive ones, protected, as far as known, by trade-mark or copyright registration. Hydrogen dioxid is the perfect type, since the name is the correct chemical one, and "solution" or "water of" being understood it is also the official title of the U. S. Pharmacopeia. By affixing the name of the brand, the preparation or rather the particular make of hydrogen dioxid is specified and insures all the distinction required to identify this make against all other makes. This is the ideal method and insures protection; besides, it familiarizes the reader with the name of the brand, and if favorably impressed with the preparation, on its use, he will know that any other article of this same brand is the make of a manufacturer who enjoys his confidence and is entitled to his patronage and preference. The same plan could be adopted for the naming of the two other hydrogen dioxid preparations, instead of "glycozone," the term "glycerite hydrogen dioxid" would at once indicate its character and far better identify the brand than the present title, although "ozone" as compounded with the prefixes "hydro" and "glyco" in these instances is not to be particularly criticized and is permissible. "Lubrichondrin," from "lubricating" and "chondrin," the accepted term for the mucilage of Irish moss, "Chondrus crispus," is fairly descriptive of composition and use, and this may be said also in a more limited degree of "Protargol Bougies," but with these exceptions all the examples in the first four groups have nothing to commend them and simply "make confusion worse confounded," since new recruits are received nearly every day, especially in Group 2. A general title, i. e., "Antiseptic Solution" or "Liquor Boroglycerini Compositus," the make specified, would be far more rational and satisfactory to the physician, pharmacist and dealers than the unscientific, confusing, pretentious and grotesque names bestowed on this class of preparations at the present time.

GENERAL FORMULAS.

The composition of these articles is usually known. A few are secret and these should be tabooed since they are on exactly the same level as are the "patent medicines," and like these will, sooner or later, be exploited to the laity as cure-alls, the testimonials received from medical men being used to "boost" them. Some of them are valuable therapeutic agents, as are the non-fatty mixtures of Group 4, and from their character they can not be so well prepared by the retail pharmacist, as on a larger scale. The following yields a product similar to antiphlogistin: glyceroplasma of kaolin (antiseptic). Kaolin, or white clay, is thoroughly elutriated, dried and made into a semisolid paste with glycerin, containing about 5 per

cent. boroglycerin; methyl salicylate or oil of gaultheria, oil of thyme, or menthol may be incorporated. The clay must be thoroughly levigated with glycerin, best accomplished in a paint-mill. Any fine argillaceous earth will answer, provided it is entirely freed from grit, by elutriation, or water-sifting, the process by which chalk is "prepared."

OINTMENT VEHICLES.

While secrecy should not be tolerated, there is no need of the exact formulas for this class of preparations so long as they are only for external use. Except in the case of powerful germicids—phenol, mercuric compounds, etc.—enumeration of the ingredients without the exact proportions is sufficient. Nor is the process necessary, since any skilful pharmacist should be able to prepare a similar article and others need not be considered.

But in semisolid fatty preparations, the vehicle employed should be designated since it is of great importance that the physician be advised as to the general dermic properties of the preparations. Thus, in the case of ointments, the fatty vehicles determine the respective general uses of the preparation, viz., if the agent is desired merely for protection, a non-absorbent fat such as petrolatum or cerate, is wanted; if intended for subdermic use, animal or vegetable fats and oils, lard, etc., while if systemic effects are desired by inunction, hydrated wool-fat is the vehicle to induce rapid absorption of the medicinal agent.

To sumarize: the trade-names should be supplanted as early as possible by pharmaceutic ones, at least as synonyms; the general composition must always be given; the vehicles for fatty preparations should be stated; the article must not be exploited to the laity, in order to secure medical patronage.

Chemicals of Group 7 will be treated under "chemicals made by patent processes."

Therapeutics.

Stomatitis Aphthosa.

Paint the affected areas four or five times with:

℞. Borax ..... 4 parts
Tincture of myrrh ..... 8 parts
Syr. of mulberries ..... 60 parts
M.

℞. Borax ..... 4 parts
Tincture of benzoin ..... 2 parts
Distilled water ..... 10 parts
Syrup ..... 20 parts
M.

℞. Sodium phosphate ..... 10 parts
Orange-flower water ..... 25 parts
Honey of roses ..... 50 parts
M.

℞. Calcium chlorate ..... 2 parts
Honey ..... 20 parts
M.

℞. Potassium chlorate ..... 3 parts
Distilled water ..... 60 parts
M. Apply four or five times a day. —*Levi.*

℞. Sodii boratis	ʒi	4
Tinct. myrrhæ	ʒii	8
Syrupi	ʒxv	60

M.

℞. Acidi salicylici	ʒss	2
Spt. vini rectif	ʒiiss	10
Glycerini	ʒv	20

—*Hirtz.*

℞. Potassii chloratis	ʒi	4
Aquæ destillatæ	ʒ8¼	200
Tinct. myrrhæ	gr. xlv	3

M. Sig. To inject into the mouth. —*Monti.*

In obstinate cases with great pain, especially affecting the tongue:

℞. Sodii salicylatis	ʒv	20
Aquæ destillatæ	ʒxxv	100

M. Sig. Use as a wash.

Or

℞. Hydrargyri chloridi corrosivi	gr. iii	2
Aquæ destil	ʒxxv	100

M. Sig. To apply with a brush. —*Levi.*

℞. Aquæ destil.
Glycerini, āā ..... ʒiiss
Iodini
Potassii iodidi, āā ..... gr. vi
M. Apply to lesions. —*Marfan.*

℞. Potassii chloratis ..... ʒi
Tinct. myrrhæ ..... gtt. xx
Elixir calisayæ ..... ʒiii
M. Sig. Teaspoonful in water every four hours. Caution: Not to be used in acute nephritis. —*Hare.*

Irritable Bladder.

℞. Benzoic acid
Borax, āā ..... ʒiv
Alcohol ..... ʒiv
Tinct. hyoscyamus ..... ʒii
Syr. wild cherry ..... ʒii
Elixir orange peel ..... ʒxii
Distilled water, q. s. ad ..... ʒvi
M. Sig. A dessertspoonful every four hours, followed by a glass of water. —*Todd: Therap. Digest.*

Ichthyol in Burns.

Ichthyol is efficacious in burns of the first and second degrees. It allays the pain at once, and slight superficial burns heal rapidly. It is used dry, diluted with zinc oxid or bismuth—the powder being spread evenly over the surface—in the form of paste, or as a combination of both methods. The zinc-oxid powder may be combined as follows:

℞. Zinci oxidi ..... ʒv
Magnesii carbonatis ..... ʒii
Ichthyol ..... fl ʒii

Below is the compositon of the paste:

℞. Calcii carbonatis ..... ʒi
Zinci oxidi ..... ʒiv
Ol. olivæ ..... ʒi
Liquor. calcis ..... ʒi
Ichthyol ..... ʒi

—*Monatsh. f. prak. Dermat.*

Seasickness.

From the *Practitioner's Manual* we quote the following:

The mere fact of being upon a vessel does not preclude the possibility that the nausea, vomiting, headache, depression, sleeplessness, pallor, perspiration, may have other causes than the one most likely under the circumstances, or that there may be some complications requiring most prompt and urgent attention. Examination of the abdomen may disclose signs of volvulus, appendicitis, obstruction, etc. Begin three days before sailing and continue for first three days out to take:

℞. Ext. taraxaci
Ext. colocynth. comp, āā ..... gr. xx
Ext. hyoscyami ..... gr. iii
Ext. nucis vomicæ ..... gr. v
Massæ hydrargyri ..... gr. xv
M. et fiant pil. No. xx. Sig. One or two each night. During this time let the diet be simple. Avoid fluids. Keep the recumbent posture on deck.

PREVENTIVE TREATMENT.

For an hour before embarking give every quarter hour, strychnin sulphate (arseniate or hypophosphate) gr. 1/120, in granules or tablet triturate. A combination of these three salts of strychnin, gr. 1/120 of each, can be given for three days, three times daily, and each night half a grain of podophyllin. —*Le Grix.*

Wear a tight bandage or belt from the ensiform cartilage to below the umbilicus. Potassium bromid, ʒss—ʒi: take, upon embarking, in a large glass of soda water and repeat for long voyages in perhaps smaller dose; or take chloral in corresponding large dose. Remove bile by giving hot water to provoke emesis. —*T. Lauder Brunton.*

Bromization is demanded, and this must be induced and kept up two or three days before, and continued for several days after sailing, and sometimes even through the entire voyage. The amount necessary to produce mild bromization varies in individual cases. Thirty grains three times a day may be sufficient, but in many cases it is necessary to give much more than this. Because of its greater acceptability to the stomach, the bromid of sodium is much to be preferred to the bromid of potassium. —*Rockwell.*

TO ARREST VOMITING.

℞ Cocainæ hydrochloratis
Ext. opii, āā.....gr. iss
Powd. marshmallow root.....q. s.
M. et div. in pil. No. x. Sig. One pill every second hour.

℞ Chloroformi
Tinct. nucis vomicæ, āā.....gtt. x
Comp. tinct. lavender.....ʒi
Water .....ʒx
M. A teaspoonful to be taken every hour until the vomiting and nausea have subsided, care being taken to shake the bottle each time before the dose is poured out. —*Barbas.*

℞ Menthol .....gr. iss	1	1
Cocain hydrochlor .....gr. iii		2
Alcohol .....ʒxv	60	
Syr. simp. .....ʒviiss	30	

M. Sig. Teaspoonful every half hour. —*Morel-Lavallée.*

Treatment of Stomatitis Ulcerosa.

℞ Acidi thymici (thymol).....gr. iv
Acidi benzoici .....ʒii
Tinct. eucalypti .....ʒss
Spt. vini rect.....ʒiii
Spt. menthæ pip.....gtt. x
M. Sig. Drop enough into a glass of water to cause turbidity, and rinse the mouth morning and night. —*Muller.*

℞ Tannin .....ʒii
Tinct. iodini .....ʒiv
Potassii iodidi .....gr. xx
Tinct. myrrhæ .....ʒiv
Aquæ rosæ .....ʒviii
A dessertspoonful in a small glassful of warm water is used to wash the mouth with thoroughly every morning. —*Thomas.*

℞ Sodii biboratis .....ʒiss
Sodii bicarbonatis .....ʒss
Thymol .....gr. iii
Glycerini .....ʒi
Aquæ laurocerasi, q. s., ad .....ʒiv
M. Sig. Use as a wash. —*Thomas.*

Treatment of Hemorrhoids.

In the *Presse Médicale* for December, Dr. R. Rounne recommends the following suppositories when there are slight excoriations or small losses of blood:

℞ Chrysarobin .....gr. iss		072
Iodoformi .....gr. 3/10		018
Ext. belladonnæ .....gr. 16/100		009
Olei theobrom.....gr. xxx	2	

M. For one suppository. Two or three suppositories may be used daily.

Later the suppositories may be replaced by the following ointment:

℞ Chrysarobin .....gr. xii		8
Iodoform .....gr. ivss		27
Ext. belladonna.....gr. ix		6
Vaselin .....ʒiiss	10	

M. For local applications several times a day.

Diuretic, With Iron.

℞ Tinct. ferri acetatis.....ʒiv
Potassii acetatis.....ʒiv
Syrupi simplicis
Aquæ, āā.....ʒii
M. Sig. Two or three teaspoonfuls four times a day.

Asthmatic Bronchitis.

Torres Homen recommends, in *O Brazil Medico*, a tablespoon of the following, five minutes before the two principal meals, in cases of bronchitis with asthma:

℞ Sodii arseniatis.....gr. iss		10
Aquæ destil.....ʒixss	300	

Treatment of Seborrhea.

Dr. J. F. Payne, in "Allbutt's System of Medicine," says: There are many popular remedies for dandruff. Washing, alkalies, lime-water, borax, etc., have some efficacy in removing the scurfy condition, for a time. And admitting that this condition is almost certainly due to the action of microbes, we treat it upon this supposition. Hence, first we shall disinfect the skin of the head as thoroughly as possible. For this purpose an antiseptic soap may be used; I prefer one containing biniodid of mercury. After washing with this a few times the scalp is to be brushed over with perchlorid of mercury solution (1 to 1000), either aqueous or alcoholic. But this treatment is not sufficient, and irritation is often produced by the antiseptic; we then have recourse to sulphur combined with carbolic acid or tar, as follows:

℞ Sulph. præcip.....gr. xv
Acidi carbolici.....m. xv.
Olei amygd. amar.....m. iii
Paraffin moll .....ʒi
M. ft. Unguent.

Coal-tar solution may be substituted for carbolic acid, and the ointment may be scented with an essential oil. Resorcin, either in a lotion—2 to 5 per cent.—or combined with sulphur in an ointment—the same proportions as given for carbolic acid—is also a very efficacious means. The ointment should be rubbed thoroughly into the roots of the hair once a day for a fortnight, and afterward used occasionally. Since patients will not tolerate greasy applications for very long, a lotion or hair wash must then be substituted. The following prescriptions are useful:

℞ Liq. carbon deterg.....m. iv ad x
Glycerin .....ʒss
Aquæ rosæ ad.....ʒi
M. ft. lotio.

℞ Glycerit. acidi tannici.....ʒi to ʒii
Acidi carbolici.....m. v
Aquæ rosæ, ad.....ʒi
M. ft. lotio.

℞ Acet. cantharidis.....ʒss
Hydrarg. bichloridi.....gr. i
Spt. camphoræ.....m. iii
Aquæ dest.....ʒi
M. ft. lotio.

The latter is used only when there is an entire absence of inflammation, as a stimulant to hair growth.

Too frequent washing with insufficient drying greatly favors the production of dandruff, and must be avoided. Seborrhea of the body, if not complicated with eczema, is easily got rid of by thorough washing followed by a sulphur ointment or lotion, or one of the other remedies recommended above for the scalp. In all affections of the head, brushes, combs, and other articles should be kept thoroughly disinfected with borax or carbolic acid.

TREATMENT OF SEBORRHEA OLEOSA.

The first step here is thoroughly to remove the sebaceous crusts, for which purpose inunction with some oily substance—such as pure olive oil, carbolized oil, a mixture of equal parts olive oil and fresh lard, or others—is necessary. These should be left on for twelve hours, and the head then washed with soap or, if the skin is inflamed, with yolk of egg. The subsequent treatment is the same as for the other variety. Sulphur in some form is the most efficient remedy.

INTERNAL TREATMENT OF SEBORRHEA.

Generally speaking, no internal treatment is necessary, and from my own experience I believe that internal conditions have little to do with the production of seborrhea. But two points have to be considered. 1. Gastric dyspepsia, though far from producing seborrhea of the scalp, may aggravate the condition when present, chiefly by producing irritation of the skin and consequent scratching. The same is true of constipation. It may then not be superfluous to correct morbid conditions of the stomach and bowels as far as possible. 2. The general nutrition of the skin may be bad, and consequently the seborrheic process gets firmer hold. Hence it may be advantageous to give a course of arsenic, which has acquired a special reputation in the treatment of certain forms of seborrhea corporis.

Medicolegal.

Five Hundred Dollars for Four Hours' Pain and Suffering.—The Supreme Court of Arkansas holds not excessive, in St. Louis, Iron Mountain & Southern Railway Company vs. McCain, Administrator, an award of $500 for the pain and suffering caused by an injury which terminated fatally in four hours' time.

Liability for Infection of Assistant.—The declaration in the New Hampshire case of Edwards vs. Lamb, an action for negligence, alleged that the defendant, a physician and sur-

geon, was employed to treat the plaintiff's husband for a wound which became an infectious sore; that the defendant knew the danger to the plaintiff of infection therefrom but negligently informed her that there was no such danger, and on one occasion directed her to assist in dressing the wound; that she, in justifiable ignorance of the truth, and relying on his assurances, did so assist him, whereby she became infected with septic poison. The defendant demurred to the complaint. But the Supreme Court of New Hampshire has overruled the demurrer. It says that the question presented was not one of breach of contract and that it was not necessary to consider how far the defendant's contractual duties extended. Nor was it necessary to decide whether, in the absence of any statement by the defendant, he would be liable. The case was one of positive action, not merely of failure to act. The declaration alleged, as above stated, that the defendant informed the plaintiff that there was no danger of infection, and when he did this he voluntarily assumed certain obligations. The fact that his duty, as to her, was merely to advise, and not to administer treatment, was immaterial. The situation was such that she needed the advice of a physician. This the defendant knew. He knew of her danger, and negligently advised her as to it, and she was injured by following his advice. That when he advised her he assumed the obligation to use due care in so doing was not open to doubt. Moreover, the court goes on to say that, if the contract to attend the plaintiff's husband were eliminated from the case the liability would be the same. The gratuitous character of the services rendered to the plaintiff would not excuse the defendant's failure to exercise such care as the circumstances demanded. On the other hand if the advice to the wife was treated as a part of the performance of the contract with the husband, the defendant still owes her the noncontractual duty to use care in the performance of such of his services as concerned her personally. Then, it was urged that there would have been no danger but for pricks in the plaintiff's fingers of which the defendant was ignorant. The court replies that there was danger unless the plaintiff's hands were free from the slightest wounds. And it adds that it can not be said as a matter of law, that a perfect physical condition is so common that the defendant could reasonably rely on it in giving advice, or that the plaintiff ought, as a reasonable person, to have understood that he was acting on the assumption that such was the fact.

Crooked Ankle Indicative of Malpractice.—Certain physicians in Kentucky were sued for damages for negligently setting a broken ankle, by reason whereof it was alleged that in healing it was crooked, and painful to use in walking. The answer denied any negligence, and alleged that the crooked condition was caused by the negligence of the plaintiff alone. On trial before a jury at the conclusion of the plaintiff's evidence, the court gave a peremptory instruction to find a verdict for the defendants. This, the Court of Appeals of Kentucky holds, was error, on account of which it reverses the judgment entered in favor of the defendants, remanding the cause for a new trial. There was no proof introduced as to the treatment, except by the plaintiff—that for five days bandages and bags of sand were used around the ankle, and then the leg reset and incased in plaster. No surgeon or expert was called to testify, and it was not shown whether this treatment was the usual and proper treatment for that kind of an injury, or whether it was unskilful to so treat it. However, it did appear in proof that the bones knit together and healed at the place of fracture, but the ankle and foot were crooked, and the ankle-joint stiff. Now the court of appeals is of the opinion that under this proof alone the jury might have concluded that the leg was not set straight by the defendants, and that it knit together as it was set, and might therefore have concluded that the defendants were guilty of negligence in replacing the broken bones. If they so concluded, a judgment for the plaintiff, it holds, would have been authorized. It says that it recognizes the well-settled principle that physicians and surgeons are held to possess only the usual and ordinary skill of the members of the profession in that community where they are engaged, and that without special contract there is no guaranty of a cure. But it goes on to declare that, in that state—Kentucky—where no person is permitted to practice medicine or surgery without a certificate of qualification from the State Board of Health, and where by the same energy and vigilance of that body the profession of medicine has reached so high a standard, it thinks a jury would be warranted in concluding a physician guilty of negligence, who, in resetting a broken limb at the ankle, would leave the ankle and foot crooked. The question presented, it adds, was not one of cure. The broken bones did unite and grow together, even in the crooked position, and would have, the court thinks, necessarily united if placed straight. This case, of Hickerson vs. Neely, is "not to be officially reported," but will be found in 54, *Southwestern Reporter*, 842, 843.

When Epidemic of Smallpox is Threatened.—Mention was made on page 377 of THE JOURNAL, that the Supreme Court of Indiana had sustained the State Board of Health in its order excluding unvaccinated children from the public schools. The decision thus briefly referred to was rendered in the case of Blue vs. Beach. But the court's opinion is rather lengthy and contains several points deserving of notice. First of all, it wants it understood that with the wisdom or policy of vaccination, or as to whether it is or is not a preventive of the disease of smallpox, courts, in the decision of cases of this character, have no concern. That question is one which the legislature or boards of health, in the exercise of the powers conferred on them, must in the first instance determine, as the law affords no means for the question to be subjected to a judicial inquiry or determination. Then, it says that there is no express statute in Indiana making vaccination compulsory, or imposing it as a condition on the privilege of children attending the public schools, but holds that, in the absence of such a law, the exclusion in question was justified, as a public emergency, under the rules and orders of the state and local boards of health respectively. And it emphasizes that it does not here go beyond holding that such exclusion may be made during the continuance of an emergency, as where there is a threatened epidemic of smallpox, as that it considers is as far as the rule or order objected to went. Nor does it think that either the holding of the Supreme Court of Illinois or of the Supreme Court of Wisconsin can, under the facts, be said to militate against the conclusion reached in this case. Here there had been an exposure to smallpox on the part of the community. This being true, and an emergency on the account of danger from smallpox having arisen, and the board of health of the city believing, as may be assumed, that the disease would spread through the public schools, and further believing that it would be prevented, or its bad effects lessened, by the means of vaccination, and thereby afford protection to the pupils of such schools and the community in general, the court holds, it would certainly have the right, under the authority with which it was invested by the state, to require, during the continuance of such danger, that no unvaccinated child be allowed to attend the public schools; or the board might, under the circumstances, in its discretion, direct that the schools be temporarily closed during such emergency, regardless of whether or no the pupils thereof refused to be vaccinated. And, under the circumstances, this power the court holds, was lodged in the local board of health, irrespective of the rule of the state board. It also declares that it would be an absurdity, under such circumstances, to require the health officials, before taking action to prevent the spread of the disease, to investigate in order to determine the degree of exposure to which every person in the community had been subjected. Besides all this, it says that it is a well-recognized fact that our public schools in the past have been the means of spreading contagious diseases throughout an entire community. They have been the source from which diphtheria, scarlet fever, and other contagious diseases have carried distress and death into many families. Surely, it then adds, there can be no substantial argument adverse to the reasonableness of a rule or order of health officials which is intended and calculated to protect, in time of danger, all school children, and the families of which they form a part, from smallpox or other infectious diseases.

Current Medical Literature.

Titles marked with an asterisk (*) are noted below.

Philadelphia Medical Journal, April 21.

1.—*Senile Arterial Plethora. (*Concluded.*) T. Clifford Allbutt.
2.—*Wesley M. Carpenter Lecture on Infection Through the Tonsils, Especially in Connection with Acute Articular Rheumatism. (*Continued.*) Frederick A. Packard.
3.—*Report of Two Cases of Fracture of Shaft of Radius. W. B. Lowman.
4.— Appendicular Abscess Rupturing into Sac of Reducible Inguinal Hernia; Operation by Drainage, with Permanent Cure of Hernia, Intussusception of Bowel Relieved by Operation; Relapse and Second Operation. Chronic Hematocele of Tunica Vaginalis Testis Associated with Encysted Omental Hernia Resembling Malignant Disease of Testicle. Orville Horwitz.
5.—*Early Operation in Appendicitis by Country Practitioner; Report of Case Probably Caused by Typhoid Infection. R. H. Harper.

New York Medical Journal, April 21.

6.—*Cancer of Stomach in the Young. William Osler and Thomas McCrea.
7.—*Contribution to Histopathology of Epidermolysis Bullosa (Hereditaria). (*Continued.*) George T. Elliot.
8.—*Consideration of Neuromuscular Elements in Hip-Joint Disease. With Especial Reference to Question of Abolition of Protective Treatment. Newton M. Shaffer.
9.—*Present Status of Widal Reaction as Diagnostic Test in Typhoid Fever. Arthur R. Guerard.
10.—*Mysticism Among Negroes. F. Julian Carroll.
11.— Hepatic Abscess. J. F. Richardson.
12.—*Some Practical Remarks on Clinical Examination of Blood. William N. Berkeley.

Medical News (N. Y.), April 21.

13.—*Pain as Pathognomonic Symptom of Ectopic Pregnancy. Henry C. Coe.
14.—*Tuberculous Disease of Urinary Apparatus. J. M. Gile.
15.—*Case of Probable Accidental Inoculation with Malarial Parasite. William H. Katzenbach.
16.—*Curability and Treatment of Early Phthisis. W. F. Hazelton.
17.— Lateral Sinus Thrombosis and Acute Leptomeningitis, both Complicating Acute Suppurative Otitis Media; Complete Perforation of Cranial Wall Above and External to Antrum. Wendell C. Phillips.

Medical Record (N. Y.), April 21.

18.—*Formation of Artificial Anus. Robert F. Weir.
19.—*Indications for Constitutional Treatment of Catarrhal Affections of Upper Air-Passages. Walter A. Wells.
20.— Case of Fracture and Medical Ethics. E. S. Goodhue.
21.—*Use of Electricity in Chronic Rheumatism. William J. Morton.

Boston Medical and Surgical Journal, April 19.

22.—*Intermenstrual Dysmenorrhea. Malcolm Storer.
23.— Treatment of Cancer of Cervix of Uterus Complicated by Pregnancy. George Ben Johnston.
24.— Third International Congress of Obstetrics and Gynecology, held at Amsterdam, Aug. 8-12, 1899. George J. Englemann.
25.— Gunshot Wound of Abdomen, with Multiple Wounds of Intestine. Howard A. Lothrop.
26.—*Practical Value of White Blood Count in Surgical Cases. J. C. Hubbard.

Cincinnati Lancet-Clinic, April 21.

27.—*Deep Breathing vs. Tuberculosis. H. H. Spiers.

Medical Review (St. Louis, Mo.), April 21.

28.—*Report of Case of Gunshot Wound of Pregnant Uterus and Fetus; Cesarian Section; Recovery. H. L. Nietert.

American Practitioner and News (Louisville, Ky.), March 1.

29.— Diagnosis of Glaucoma without Ophthalmoscope. M. F. Coomes.
30.— Cholelithiasis. R. C. Falconer.
31.— Cerebrospinal Meningitis. T. D. Williams.
32.— Typhoid Fever a Curable Disease. J. L. Stillings.

Medical Age (Detroit, Mich.), April 10.

33.— Some Remarks Concerning Suitable Treatment Before, During and After Surgical Operations. J. A. Jackson.
34.— Technique Governing Use of Harris's Urine Separator. H. F. Harris.

Bulletin of Johns Hopkins Hospital (Baltimore), March.

35.—*Notes on Improved Method of Removing Cancerous Uterus by Vagina. Howard A. Kelly.
36.—*Preliminary Report of Surgical Treatment of Complicated Fibroid Tumors of Womb, with Description of Two Methods of Operating. Howard A. Kelly.
37.— Congenital Malformations of Heart as Illustrated by Specimens in Pathologic Museum of Johns Hopkins Hospital. W. G. Mac Callum.

Journal of Cutaneous and Genito-Urinary Diseases (N.Y.), April.

38.—*Contribution to Histogenesis of Melanosarcoma of Skin. Alfred Schalek.
39.—*Notes of Thought on Malignant Tumors. B. H. Buxton.
40.— New Urethral Instillation Syringe. Angus McLean.

Laryngoscope (St. Louis, Mo.), April.

41.— Past and Present of Laryngology. Orlando B. Douglas.
42.— Associated Frontal Sinus and Mastoid Disease. Thomas J. Harris.
43.— Case of Carcinoma of Pharynx. Gottlieb Klaer.
44.—*Tooth in Left Nasal Cavity Causing Purulent Rhinitis. Homer Dupuy.
45.— Radical Treatment of Follicular Tonsillitis. M. A. Goldstein.

Denver Medical Times, April.

46.— Report of Case of Mucous Colic. H. B. Forbes.
47.— Influence of Infectious and Hereditary Diseases on Developing Mind. J. A. Lambert.
48.—*Typhoid Fever. G. Law.
49.— Nose and Throat Affections. C. H. Powell.
50.— Report of Case of Septicemia and its Treatment. Arthur C. Bell.
51.—*Medical Science of Talmud. Nuphtuli Herz Imber.

Medical Standard (Chicago), April.

52.— Diagnosis of Diseases of Heart. Albert Abrams.
53.—*Incurability of Leprosy. Albert S. Ashmead.
54.— Laryngeal Tuberculosis, Suppurative Ethmoiditis and Acute Non-Suppurative Ethmoiditis. William L. Ballenger.
55.— Measles and Treatment. Marcus P. Hatfield.
56.— Urinary Diagnosis and Treatment, Including Microscopic and Chemical Examination. J. W. Wainright.
57.—*Strangulated Hernia from General Practitioner's Standpoint. C. F. Wahrer.
58.— Diagnosis and Treatment of Ectopic Gestation. C. K. Fleming.

Ophthalmic Record (Chicago), April.

59.— Need of More Careful Measurements of Refraction. E. W. Stevens.
60.—*Study of Changes in Refraction in 400 Eyes During Seven Years. Howard F. Hansell.
61.— The "Crossed Cylinder" in Determination of Refraction. T. B. Schneideman.
62.— Dioptric Power of Cornea. William N. Suter.
63.— Extraction of Congenitally Dislocated Opaque Lenses, with Presentation of Case. Wm. H. Wilder.

Chicago Clinic, April.

64.— Rachitis. Frank B. Earle.
65.— Study and Dissection of Pelvic Outlet. W. T. Eckley.
66.— Retrostrictural Edema in Female Bladder. Gustave Kolisher.
67.— Report of Case of Cystinuria Complicated with Uricacidemia. G. A. Gilbert.
68.— Surgery of Hand. W. A. Kuflewski.

Louisville Monthly Journal of Medicine and Surgery, April.

69.—*Ureteral Fistulæ. T. S. Bullock.
70.—*Nitrous Oxid. W. E. Grant.
71.—*Lobar Pneumonia: Its Treatment. C. L. Venable.
72.— Review of Progress of Medicine during Nineteenth Century. H. Brooker Mills.
73.—*Systemic Anesthesia of Chloroform and Ether: Practical Points from a Personal Experience of 2300 Cases. (*Continued.*) James W. Guest.
74.— Case of Rabies. D. L. Field.
75.— Gunshot Wounds. H. G. Sandlin.

Physician and Surgeon (Detroit and Ann Arbor, Mich.), March.

76.—*Pathology and Treatment of Typhoid Fever. George Dock.
77.—*Report on Question of Contagiousness of Pulmonary Consumption. Johann Flintermann.
78.—*Earlier Diagnosis and Treatment of Pulmonary Tuberculosis. George Duffield.
79.—*Complicated Wounds of Intestines. Hal C. Wyman.
80.— Forceps and Gauze Carrier. Emil Amberg.

New York Lancet, March.

81.—*Cleanliness in Minor Gynecology. Alex. J. C. Skene.
82.— "Floaters" in Urine. Ferd. C. Valentine.
83.— Brief Discussion of Certain Conditions Frequently Associated with Movable Kidney. Charles M. Niesley.

Kansas City Medical Index-Lancet, March.

84.— Address Before Grand River Medical Association. F. W. Burke.
85.— Displacements of Uterus. H. C. Crowell.
86.— Rectal and Anal Surgery. Samuel G. Gant.
87.—*Clinical Report on Cases of Unusual Interest. Thomas H. Manley.
88.—*Further Observations on Treatment of Abdominal Viscera Through Colon. Fenton B. Turck.
89.— Convulsions in Children and Their Significance. John Punton.

Texas Medical Journal (Austin), April.

90.—*Vaccination. H. A. Engelhardt.
91.—*Scalp Wounds. W. E. Fowler.
92.—*Electricity and Gynecology. M. B. Grace.

The Stylus (St. Louis, Mo.), April.

93.— Paresthesia. Acne. John V. Shoemaker.
94.— Salpingo-Oöphorectomy and Suspension of Retroflexed Uterus: Remarkable Abdominal Spasms and Post-Operative Hemorrhage; Abdomen Reopened; Recovery. Spencer Grave.
95.— Case of Hemiplegia of Specific Origin. Sidney I. Schwab.
96.— Interesting Decision. John A. Harrison.
97.— Radical Treatment of Follicular Tonsillitis. M. A. Goldstein.
98.— Limitations of Tuberculosis. Wm. Porter.

Medical Council (Philadelphia), April.

99.— Selection of Frames and Prescribing Them with Glasses. A. H. P. Leuf.
100.— Case of Dislocation of Shoulder with Unsuspected Fracture of Anatomic Neck of Humerus. J. M. Salmon.
101.— A Safe Inhaler. Willis Cummings.
102.— Treatment of Pneumonia in Children. Abraham Goltman.
103.— Failure of Buisson Treatment of Hydrophobia. C. M. Smith.
104.— Pigeon Post Pointers. (*Continued.*) Charles L. Lang.
105.— Uterine Fibroid: Ruptured Ovarian Cyst. E. E. Montgomery.
106.— Chronic Middle Ear Catarrh. E. B. Gleason.
107.— Points in Surgery. William V. Morgan

Journal of Boston Society of Medical Sciences, March 20.

108.— Solid Stage of Large Intestine in Chick, with Note on Ganglion Coli. Chas. S. Minot.

109.— Lobule of Lung and Its Relation to Lymphatics. W. T. Councilman.

AMERICAN.

1. **Senile Arterial Plethora.**—Allbutt treats especially of the senile fluctuations of the blood pressure, which is often temporarily increased in the aged. He quotes from Savill, his post-mortem findings showing the general increase of the arterial coats, more especially of the muscular coat, and his views that senile vertigo and senile syncope are clinical manifestations of this arterial hypermyotrophy.

2. **Infection Through Tonsils.**—The routes of infection through the system are first noticed by Packard with special reference to the mouth, where it would seem from the abundance of micro-organisms that there must be constant infection of the mucous membrane. The tonsils are especially exposed, and he briefly reviews the comparative anatomy and concludes that they are not evolutionary vestiges. He is inclined to believe that they have certain protective functions, acting as do lymph nodes, and form a defensive outpost of the digestive tract. We have, therefore, to consider them as dangers to the organs no more than we should look on the inguinal glands as a danger point in venereal disease. Diseases of the tonsils are evidence of the protective conflict in retaining the bacteria and destroying their virulence. He reviews the various disorders which have been found to follow or complicate tonsillar inflammation, as they have been observed by various authorities. Among these are cardiac disease, pleurisy, synovitis, skin lesions and chorea. Of this last he reports two cases. He refers to the infection theory and its origin.

3. **Fracture of Radius.**—After first noticing the usual textbook statements as to diagnosis of fracture of the shaft of the radius, Louman says his experience has been contrary to these. The cases he reports and illustrates he thinks could not be diagnosed without the use of the X-ray. Both were of interest to him on account of the uncertainty of the fracture of the bone, one being mislead by the arm being straight, the ulna being in position.

5. **Appendicitis.**—Harper reports a case of operation for appendicitis in country practice, under unfavorable circumstances, with success, excepting the occurrence of stitch abscess along the upper part of the incision. The disorder appeared to be a sequel of typhoid.

6. **Cancer of Stomach in Young.**—Cancer of the stomach in persons under 30 years of age is here considered as occurring in the young. Cases occurring before the age of 20 are clinical and pathologic curiosities. Those in the third decade of life, however, are more numerous, and show fairly uniform symptoms. Osler and McCrae analyze a few cases in the first and second decades, which are in most cases rather rapid, though in accordance with Dock's experience cancer of the stomach in early life runs a slow course. They next report six cases occurring in the third decade, which constitute 4 per cent. of the total of their series. In all the disease was rapid and the onset abrupt in 4 of the 6. Certain symptoms are mentioned in detail: Loss of appetite was present in 2 cases, pain in all but one and fairly serious, and accompanied with vomiting, which was absent in the others. Tumor was present in 5, though found only at autopsy in 1. In none of these 6 was there ascites, and 3 were febrile. Only 1 was prolonged over eighteen months, and in 4 others the duration was known; all were under six, and the fifth was also probably of short duration. The authors quote the two following conclusions: 1. Cancer of the stomach below the age of 30 has generally a rapid progress in some months, and often ends suddenly by incidents more or less abrupt. 2. Early cancer is not latent—it is often overlooked.

7. **Epidermolysis Bullosa.**—Elliot describes and discusses at length cases of this disorder, which he thinks is not easily confounded with other bullous affections.

8. **Hip-Joint Disease.**—The spasmodic muscular symptoms and the functional disturbances of hip-joint disease are noticed by Shaffer. The special practical points are the question when to discontinue immobilizing and rest treatment, and to allow free movement and use of the limb. He favors the use of prolonged protective treatment until he is satisfied that the reflex muscular spasms have ceased to exist and the damaged joint is in a state of true convalescence. The latter does not begin in hip-joint disease before the important symptoms which enable us to make a diagnosis are present or before the joint disability is relieved so as to make the hindrance to locomotion of lesser effect than that occasioned by simple disuse, and not so long as any deformity is present. Still, the danger of too long immobilization is a real one, and when the joint is free from reflex muscular spasm, it may be at once placed on gradual treatment by use and movement.

9. **Widal Reaction.**—Guerard concludes, from a review of the published facts and his own experience of three years including the examination of about fifty specimens a week, that the Widal reaction is as reliable a test as any bacteriologic one now in use. The serum reaction is never present in other diseases if correctly tested and in proper dilution. It does not appear as a rule during the first few days of disease, but is usually manifested before the eruption appears and is only occasionally late in its appearance and very rarely absent. While it has its undoubted limitations, it is nevertheless of value to diagnosis in irregular and mild cases of typhoid.

10. **Mysticism Among Negroes.**—Carroll describes the superstitious ailments of negroes and his success in treating them under the advice of an old experienced physician. The treatment was purely mental, the performances largely to affect the imagination, and its success was brilliant.

12. **Clinical Examination of Blood.**—The vital facts to be ascertained in the examination of the blood are: 1. Number and character of red corpuscles. 2. Number and character of white. 3. Proportion of various kinds of white. 4. Presence of parasites. He details the method of counting, but the study of stained films is much more valuable. The usual method of making them is given. The latest formula for Ehrlich's "triacid stain" is the best he has ever worked with. None but Grübler's colors should be used in compounding it. Of the primary diseases of the blood, chlorosis, pernicious anemia, and leucemia can be diagnosed as a rule in from a few minutes to an hour's study with the Ehrlich stain. He has not found any case of filaria sanguinis, but as regards malarial parasites he directs as follows: To prepare fresh blood for examination, take three covers and three slides, cleaned. Draw the blood—a minute fresh drop—touch the cover with it, drop each cover on a slide and see that the blood spreads without pressure. Put by in a warm place if immediate examination is not practicable. By coating the margin of the cover with vaselin the blood will often stay good for an hour or more, though the fresher the specimen the better the chance of showing the characteristic ameboid movement of the plasmodium, which is invaluable for identification. We should try to get the specimen during or just after or before the paroxysm, and he thinks it bad practice to give quinin before the parasite has been found if the chances of finding the germ are considered. When fresh specimens can not be examined, dry films properly made and properly stained will be nearly as good. He describes a quick method for this.

13. **Ectopic Pregnancy.**—After giving some illustrative cases showing the peculiarities of the symptoms in ectopic pregnancy, Coe concludes that pain alone, when not accompanied by a clear history of menstrual irregularity, symptoms of pregnancy, and the presence of a tumor at the side of the uterus or in Douglas' pouch, is pathognomonic of extra-uterine pregnancy only under certain conditions, viz.: The pain is of a sharp colicky character, distinctly localized on one side, attended with faintness more or less marked, and is usually followed by intervals of hours or days of complete remission. The pulse is accelerated during the attack, but there is no rise of temperature. The latter is an important symptom, distinguishing ectopic from inflammatory conditions. The violent tearing pain attending intraperitoneal rupture is accompanied by the unmistakable evidences of internal hemorrhage. In extraperitoneal rupture the symptoms vary in severity according to the amount of blood lost, but soon subside, being succeeded by the usual evidences of pressure resulting from a mass in the folds

of the broad ligament which displaces the pelvic organs. A persistent pain following the acute attack may indicate localized peritonitis.

14. **Tuberculous Disease of Urinary Organs.**—Gile finds that tuberculous disease of the urinary organs is a condition of considerable frequency, more so probably than the number of cases diagnosed would indicate. Its course is variable; it may be rapidly fatal or chronic, and for certain diagnosis one must depend on the bacteriologist, though this course does not always definitely localize the trouble. He does not think that the affection originates in the kidneys as a rule, but that many cases start primarily from the bladder. The hereditary character of the disease appears to be more definitely marked than in pulmonary tuberculosis. From his own cases he thinks it occurs more frequently in early adult than, as frequently said, in middle life.

15. **Accidental Malarial Inoculation.**—Katzenbach reports a case of a physician, thoroughly examined bacteriologically, where malaria was apparently contracted through an operation of hysterectomy on a woman who had recently come from a malarial district in North Carolina. The parasite found was of the estivo-autumnal type, which has not prevailed in New York, and the patient had previously been in good health.

16. **Curability of Early Phthisis.**—Hazelton reviews the statistics reported by various authorities as to the proportion of cured cases of tuberculosis. He thinks the fact established that from 10 to 50 per cent. of cases, according to individual resistance and promptness of treatment, are curable.

18. **Artificial Anus.**—The difficulties of properly producing an artificial opening of the intestines are noticed by Weir, who reviews the different methods and sums up as follows. 1. An artificial anus of a temporary character can be best established by Maydl's operation or by Bodine's modification. 2. Overslipping of feces may be prevented by proper spur formation, by narrowing the rectal opening, or by occluding the rectal end of the bowel, which may be fastened in the wound or dropped into the abdominal cavity. 3. Continence of the abnormal outlet is aided by muscle separation (Maydl) or by muscle bridging (von Hacker and Hartmann), or by the use of inflatable or moulded plugs or other apparatus. 4. It is only, however, to be satisfactorily effected—though larger experience in this is desirable—by an extra-abdominal iliac outlet (Witzel's iliac colostomy) to be made by opening the bowel outside and behind the iliac spine. In this procedure the bowel is compressed between the edge of the bony pelvis and the skin.

Many other methods have been proposed. Some, like Witzel, have made the outlet externally, but by gouging a hole through the iliac bone. Other schemes have been tried and have failed. A few are unsurgical. Perhaps some have promise, and may in time, their value not now being recognized, develop into methods of note. He has himself operated in 30 cases with 9 deaths, 2 from cancer, 3 from ulceration and 4 from obstruction. In 18 of these, colostomy was a preliminary to operation or was a curative agent. There were 7 in which the opening was subsequently closed.

19. **Constitutional Treatment of Catarrh.**—The catarrhal affection of the upper air-passages, or what may be so-called, from diseases of other regions of the body are noticed by Wells. He thinks that the responsibility for much of the greater number of secondary catarrhal affections of the upper respiratory organs belongs to the gastro-intestinal system. Among these he specially mentions a form of throat disorder involving the lingual tonsil as connected with dyspepsia, and he also notes the condition of intestinal flatulence insisted on by Moritz Schmidt as a factor in the production of catarrhal diseases of the upper air-passages. Those of the reproductive organs, etc., are also noted, and especially the so-called uric acid diathesis. This last he considers as often having much to do with the nervous irritability, which he calls neurohyperkinesia, and this, with other conditions like hysteria and neurasthenia, is often responsible for catarrhal disorders. He gives a few brief indications as to treatment for each of these.

21.—See abstract in THE JOURNAL of April 14, p. 934.

22. **Intermenstrual Dysmenorrhea.**—After briefly reporting twenty cases of his own observation, Storer remarks that he has collected twenty-five more from the scanty literature on the subject. He found that in these the pain appeared regularly every month, within a few days of a definite period, generally along about the 12th to 16th day. In most cases it was paroxysmal, in about one-half it resembled that of menstruation. Its duration was generally two to three days. The pain was sharply limited in 14 cases; in 12 it was more general. In no case was there any discharge. It certainly is not always ovarian and in a large proportion there was a more or less inflammatory condition of the appendages. The various theories of the condition are reviewed and the objections to them stated. The author offers the following theory which, for the want of a better name, he calls "the awakening of menstrual activity" theory: "The intermenstrual pain coming about the fourteenth day from the beginning of menstruation, the nineteenth after the climax of Stephenson's wave, occurs just about the time the pressure line has reached its lowest point. Can not then the intermenstrual wave, if one exists, be one of preparation rather than a subsidence, a nervous explosion, so to say, as if nature were waking up with a more or less violent effort to make ready for the coming activity, whether menstrual or ovarian? We have seen how for nearly three weeks the wave of vital energy has been running down hill and the system has, as it were, got into a rut. Nature suddenly says this decline must be stopped, and in the readjustment of forces that ensues as the human machine begins to work again with greater energy, it is not to be wondered that there should be groaning from some of the machinery, which, however, after a day or two finds its bearings again and then works automatically and in silence. This theory would not be incompatible with the fact that this pain occurs under such a variety of pathologic conditions, ranging from simple endometritis to pyosalpinx and fibrosis. The pain does not of necessity come from any one organ, but from whatever organ is the most irritable or diseased, will come the loudest protest at the sudden arresting of the comfortable vital decline."

26. **White Blood Count in Surgery.**—Hubbard finds, from an analysis of the surgical records of the Massachusetts General Hospital, that the white blood count may vary very largely without indicating the condition of suppuration, and that from our present knowledge of the cause and variations of leucocytosis, we can not make any deductions simple enough to be of great use to the surgeons at the bedside. In some cases the blood count may indicate an exactly opposite condition to what is shown by the physical signs.

27. **Deep Breathing vs. Tuberculosis.**—The point of Spiers' article is that by deep breathing we call into exercise the healthy lung tissue we possess, and cause better aeration and better blood-supply. The bacilli of tuberculosis can not act provided the aeration of the blood is perfect. He says that the number of germs in the atmosphere is of little moment provided there is perfect aeration of the blood.

28. **Gunshot Wound of Fetus.**—Nietert reports a case of gunshot wound involving the uterus and fetus, followed by Cesarian section and recovery of the mother. The notable points of the case are the rarity of the accident and the absolute lack of any infection, nothwithstanding the bullet's passing through several layers of dirty clothes. There was a large powder burn on the skin, and the patient confessed, when confronted by this fact and its necessary inference, that the wound was self-inflicted.

35. **Operation in Cancerous Uterus.**—Kelly says that his views in regard to extirpation of cervical cancer have changed somewhat during the past year, and that he now believes that glandular metastases are not so important in mammary cancer or are rare until the later stages. He offers a new method of operation which he details at length. He first insists on catheterization of the ureters. Then, after curetting, he cuts through the vagina on all sides, strips it loose from the bladder, opening the peritoneum as widely as possible. If the bladder is diseased, the base of it may be cut off and left sticking to the cervix. The uterus being attached by its broad ligaments alone, a gauze pack is inserted behind it, while the anterior wall is pulled down with the forceps through the anterior incision,

until the fundus appears at the vaginal outlet. The next step is to bisect the uterus from above downward, and half of it is caught by a stout museau forceps. Catching the cervix of the same side, the body is also completely severed from the cervix by dividing from within outward. As soon as the division is done the uterine vessels are clamped in the exposed cellular tissue and the detached body is pulled farther out, the round ligament clamped and lastly the uterine cornu. In this way one quadrant of the uterus is removed. The same method is followed on the opposite side. The ligatures are then applied in place of the clamps. The ovaries and tubes are removed after the body of the uterus, and it then becomes an easy matter to take out the cervix on the side which is least implicated. Under all circumstances give it the widest possible berth, keeping the rigidly catheterized ureter under touch all the time; three-quarters of the uterus having been removed, the remaining quadrant, that half of the cervix on the side where the infiltration of the broad ligament is most marked, is then extirpated. The operator holds in the grasp of his forceps a small nodule, one-half of the cervix, and the idea is to get it out with perfect control of the vessels, giving it the widest possible berth. This may be done in some cases by ligatures, but it will be better done in the other cases by cautery clamps (Skene's), or by igni-extirpation, as done by Mackenrodt. If the ureter lies clearly beyond the diseased area, and is uninfected, it may be dissected out and left intact. In many cases, however, the operator must not hesitate to cut it off above the diseased area and proceed with wide enucleation of the nodule as if it did not exist. After enucleation the ureter may be turned into the denuded bladder and stitched there. The anterior and posterior peritoneal surfaces are then drawn down and attached to the vagina, and are again sutured together in the middle line so as to leave but two small openings up in the pelvis, which are loosely stuffed with gauze.

36. **Fibroid Tumors.**—Kelly describes two new methods of enucleating complicating fibroid tumors. In the first the large tumor occupies the lower uterine section, elevating the uterus as well as the ovarian vessels and choking the pelvis. He prevents hemorrhage by thrusting two long-jawed pedicle forceps through the capsule of the tumor on each side, at about the level of the round ligament, until the point appears on the posterior surface of the tumor, then clamps powerfully down on the uterine and ovarian vessels. Then pulling the two cornua in opposite directions, he bisects and cuts down into the tumor as far as the vesical peritoneum, which is freed and pushed down; then he enucleates the left and right halves of the tumor by a blunt crenated spatula. The uterine artery is then easily reached and tied at a point below the body of the uterus, then the bed of the tumor closed by buried sutures and the vesical peritoneum drawn over and attached to the posterior peritoneum concealing the wound and the operation finished. "The enucleation of the bisected uterine body may be done after the removal of the tumor in one or two ways—either by tying the ovarian vessels, now easily reached, and the round ligaments and lastly the uterine vessels and then amputating, or by severing first one then the other half of the uterus from the cervix, below, cutting from within outward, from the center of the cervix toward the broad ligament, and so exposing and catching the uterine vessels, after which they are divided and each half is pulled up in turn by its cervical extremity and the round ligaments of the ovarian vessels tied in order. The direction of the enucleation in this case is from below up, the reverse of the direction ordinarily taken; the extirpation in this way is facilitated by the sagittal bisection of the uterus." The second operation, which he has performed but once, is, he thinks, adapted for those cases in which there are dense adhesions of the upper pole of the tumor, which can not be dealt with without great risk by operating from before backward. In this operation he caught up the cervix by short-toothed museau forceps and brought it up within reach. The vesical peritoneum was then detached and pulled down, exposing more of the cervix, which was caught with a second pair of forceps. A knife was then passed through the cervix in the antero-posterior direction between the two pairs of forceps, and the cervix was cautiously divided from side to side, and pulled apart. The cellular tissue to the left was first exposed, the uterine vessels clamped with short, stout forceps, and the right one treated in the same way. The upper forceps was then used to drag up the tumor and the uterine body, rotating them on a transverse axis, first exposing the round ligaments and then the ovarian vessels of the left and right sides, respectively; these structures were clamped and the whole mass disconnected from its pelvic attachments. The tumor now only remained adherent by the dense adhesions at its upper pole. The next step was the rupture of an enormous abscess lying behind it and extending from the center of the tumor into a sac bordered posteriorly by the lumbar vertebræ and above by the mesocolon, and discharging through a large opening into the transverse colon. The tumor now rolled out, being enucleated from behind forward without added injury to the bowel, other than was rendered necessary by the opening into its lumen. The contaminated abdominal cavity and the abscess cavity, containing at least a liter of thick yellow pus, were cleansed, the opening in the bowel sutured and the long abdominal wound closed, leaving a large iodoform gauze drain about the umbilicus into the remainder of the sac under the colon. The patient made an excellent recovery.

38. **Melanosarcoma of the Skin.**—Schalek finds, from an observation and analysis of the literature, that while the final decision as to the histogenesis of melanosarcoma is not easy, it appears that the standpoint taken by Unna and his followers is probably correct. Melanosarcomata of the skin do arise from the pigmented epithelial cells of the epidermis; these cells proliferate into the connective tissue and become entirely detached from the epidermis; still further proliferating, after having been cut off, these cells lose their epithelial character and assume that of ordinary connective tissue elements and that of those particular pigmented cells known as chromatophores. This view, that epithelial cells may undergo such a metaplasia under pathologic conditions, is not at all improbable, since L. Loeb has also stated in another paper that chromatophores of a typical character originate from epithelial cells. Concerning the pigment, we have found that it is finely granular and not very dense in the epithelial cells from which the melanotic tumor arises. The pigment becomes more coarsely granular, the more pigmented cells assume the character of connective tissue cells, more particularly that of chromatophores.

39. **Malignant Tumors.**—The following is the summing up of Buxton's paper: 1. Carcinomas contain connective tissue stroma because there is an attempt at defense on the part of the organism. 2. Their increase is not prevented, because the cells can multiply in the newly-formed lymph spaces of the stroma. 3. Sarcomas, as a rule, contain non-connective tissue stroma, because they consist of the very cells which would be called on to form it, and which are now in revolt. 4. Sarcomas contain numerous blood-vessels, because these always penetrate masses of immature connective tissue cells, whether in the embryo or the adult. 5. Certain sarcomas contain connective tissue stroma because the cells composing them are ordinary connective tissue cells, so that the latter are able to attempt defense. The defense fails for the same reason as it fails in the carcinomas. 6. Tumors containing connective tissue stroma form metastases via lymphatics, because the newly-formed lymph spaces in which their cells are growing open up communications with the regular lymphatic channels. 7. Tumors containing no connective tissue stroma form metastases via the blood-vessels, because the cells can easily break through the immature walls, while lymph spaces are absent.

44. **Rhinitis Due to Tooth in Nasal Cavity.**—Dupuy reports a case of purulent rhinitis the source of which was finally discovered to be a carious tooth growing in the nasal cavity. The only case in literature which he has found similar to this was that of Tyler, which was a supernumerary tooth, while in this case it was a misplaced one.

48.—This paper appeared elsewhere: See abstract in THE JOURNAL of Oct. 21, 1899, ¶ 68, p. 1033.

51. **Medical Science of the Talmud.**—Imber claims that the Talmud anticipated the discovery of many valuable methods

and hygienic facts. It ascribes all diseases to certain little dangerous ones which it calls "shedins"—destroyers. In accordance with this bacilli theory the following hygienic laws were enacted: "1. If an animal was killed, the Talmud urges, under certain penalty, to cover its blood with the dust of the ground or with ashes. (As it has been proven that the belly of mother earth is the best of bacilli destroyers.) 2. No Jew was allowed to wear hide in its raw state as a garment. 3. No tannery was allowed to be established, except two miles from the city and not on the east side, for the wave in the Orient was mostly easterly winds. 4. No spitting was allowed in the city of Jerusalem. (Our moderns have realized the danger 2000 years later.) 5. Four cubits of space shall be allotted to each person in a room. (Our modern board of health of course ignores that law and the tenement houses in the big cities have not a yard to spare for a person.) 6. To beware of flies of lepers, as they are transmitters of the disease. (In perfect harmony with views of modern science.) 7. To investigate every slaughtered animal, if it had not a lung or liver trouble. (If our inspectors sent out by the 'board of health' to investigate the slaughter houses would observe that law, the Christian people would enjoy the sanitary benefit which the orthodox Jew enjoys in regard to health.) 8. To throw out the water where a person just died, and destroy all his clothes. (That law was most beneficial to the human race, and I think, if the board of health should take it into consideration, they will not give a permit to the second hand clothes dealers until their goods were disinfected.)"

53. **Incurability of Leprosy.**—Ashmead reviews and discusses the cases of reported cure of leprosy, and finds that with no case was there more than temporary relief of symptoms. He is especially critical of Dyer of New Orleans, and his views as to the possibility of the cure of this disease.

57. **Strangulated Hernia.**—The frequency of this accident renders it a part of the experience of almost every general practitioner. Wahrer therefore insists on the necessity of the physician being able to operate; in many cases the question of prompt operation is one of life or death; the patient has everything to gain by it, as it may save his life, and otherwise he will surely die. He advises the physician who has such a case to call in the assistance of a neighboring practitioner, or two are better, and to follow the following technique: Wash the patient clean, shave off all hair over and near the site of the operation, wash the hands clean, boil the instruments—in a bread pan if there is no regular one in the surgeon's outfit—in a solution of soda, then spread a boiled towel over a small table and lay the instruments on it—if the towel is wrung out of a 5 per cent. creolin solution so much the better. The patient is placed on a kitchen table, and when he is under the anesthetic an incision is made through the skin and fat in a semicircular line, the convex side toward the umbilicus, then through the three layers of muscles. The sac of the hernia is then followed down to the ring and an incision made large enough to enable return of the bowel. The sac is drawn out as far as possible, tied off with a stout catgut, or better a kangaroo tendon, and in a similar manner, any redundant mass of omentum cut off, dropping both stumps back into the abdomen. One must carefully avoid including the cord in the ligations or the coverings, and sew up the peritoneum with catgut, also the three layers of muscles, lastly the skin with catgut, silkworm gut or silk—which is better. Over the wound gauze is applied, a good layer of absorbent cotton over that, and it is secured with adhesive strap or bandages and the patient put to bed. He says expert surgeons must not criticize him for this unrefined technique and gives also in detail the directions for antisepsis. The instruments are simple and inexpensive. As regards antisepsis, he says: "Get a bread pan or two, put your instruments and needles into one of them, some boiled water in the other; it does not matter if you put any drugs in as antiseptics or not, so you have things clean. Wash your hands, if you have nothing better, in boiled water and soap, then more water and soap, then some more water and soap. Keep this up for fifteen or twenty minutes and your hands will be as clean as those of Lawson Tait." Avoid rough and useless effort at taxis and rough handling of the bowels and avoid rough handling of the cord.

60.—See abstract in THE JOURNAL of March 17, p. 688.

69. **Ureteral Fistulae.**—Bullock reports a case of ureteral fistula which seems to have been caused by an infected ligature in close proximity to the ureter, producing ulceration. The tumor opened externally through the inguinal opening, and is now nearly closed.

70. **Nitrous Oxid.**—After giving the chemistry of the drug, Grant describes the methods of its use. The known rules in anesthesia should not be overlooked with this anesthetic. An empty stomach need not be insisted on, but it should not be distended. The sitting posture for short operations may be maintained throughout, and the head should be bent forward rather than backward as there is less danger of the tongue falling back. All foreign substances should be removed from the mouth, such as plates, etc. A prop should be placed between the teeth. The first impression on the patient is a sweetish taste of the gas and a certain sense of oppression. In the second stage there is a tingling sensation and consciousness is lost, and the narcosis deepens into the third or anesthetic stage. The circulatory system is but little disturbed, but the respiratory is more affected and the physical indications are those of asphyxia. Then the anesthetic is profound enough for minor surgery, and the inhaler should be withdrawn and the operation performed. The hemorrhage following the use of nitrous oxid is generally venous and may be profuse an hour or more after extraction. Recovery is usually rapid. The dangers are through the respiratory function, and intensified lividity of the face, great and sudden pallor, and cessation of respiration must be regarded as symptoms thereof. The secondary effects of nitrous oxid are trivial; there is no proof of secondary serious complications.

71. **Lobar Pneumonia.**—The treatment of lobar pneumonia, acording to Venable, is first, proper feeding, milk diet, meat broth, etc., with stronger and more soluble foods after the crisis is past. Cardiac stimulants should be used when the first signs of heart failure appear. He employs alcoholics in this case, in moderate doses. In an urgent need he uses strychnia, hypodermically. Like strychnia, digitalis may be valuable —10 minims of the tincture every three or four hours. Nitroglycerin is an excellent adjuvant and useful when renal secretion is scanty. Aromatic spirits of ammonia is an excellent cardiac stimulant in the feeble heart in pneumonia. Beginning cyanosis is a signal for the use of respiratory stimulants, oxygen by inhalation, strychnia and atropia. Hydrotherapy is useful and he relies mainly on cold sponging, but pays little attention to temperature unless above 104 F. If he were to give antiseptics, he would use carbolic acid, 1 minim, or thymol 2 to 3 gr., or mercuric chlorid 1-1000 every four hours. Morphin will do for the initial pain, but it is rarely necessary to continue it after the second or third day. Internal antipyretics are not desirable, and arterial sedatives should also be used sparingly and their effects watched. Nervous symptoms are usually met successfully with bath and the ice-cap, and sometimes in the advanced stages stimulant expectorants may be used, though they are generally useless.

73. **Anesthesia.**—Chloroform and ether are the anesthetics generally used. In this article Guest gives the indications as regards chloroform. He first insists on buying only small bottles, two ounces or less, as the drug is then fresher and better. He has a careful uranalysis made a few days before operation, with a warm bath and moderate supper the night before. If the patient is constipated he gives a cathartic two days before, otherwise a saline only, followed by an enema the next morning. A cup of coffee, tea, milk or water may be given three hours before. If the patient is not desperately ill, no drug should be given before operation. He never gives morphin or atropin before giving an anesthetic, as this takes away the pupil reaction, which is one of the first warning signs. He finds the Esmarch drop-bottle the best method. He warns the patient to expect a choking sensation, and, starting with only a few drops, he gradually increases this until surgical anesthesia is accomplished, then very much less will be re-

quired to maintain it. After the incision is made in abdominal surgery, he uses the lightest possible anesthesia. He thinks there is not much choice as to position, but there is much danger in change of position during anesthesia. It is better not to crowd the chloroform during the stage of excitement, and there is no necessity of touching the conjunctiva to produce the conjunctival reflex. If the eye does not rotate by exposing it to the air, it is a safe rule to withdraw the anesthesia for a few seconds. We should be sure never to miss a heart beat or lose a respiration. No anesthesia should be continued if the pupils commence to dilate after the patient is well under its influence. Before commencing, he rubs the lobe of the ear gently between the fingers and watches the capillary circulation. He repeats this every few minutes and, if the circulation falls, the patient is sinking and requires a hypodermic of nitroglycerin, or digitalin, 1-100 gr., repeated in ten minutes if needed. It is difficult to tell by the breathing whether the patient is taking the anesthesia well. When he can distinguish laryngeal stertor, he throws aside the anesthetic and extends the head and neck pushing the inferior maxilla forward. The most alarming symptom is when the breathing is irregular and spasmodic. He then stops at once and resorts to respiratory stimulants hypodermically, and by inhalation. Warning is given that abdominal breathing is not a constant sign that air is entering the lungs. One of the best and most accurate signs is the circulation. When the pulse commences to lose its *vis a tergo*, the finger on the temporal artery is sure to note it. There is a steady lowering of the arterial pressure beginning and ending with chloroform inhalation.

76. **Typhoid Fever.**—Dock is not prepared to say positively that typhoid fever is specific in the sense that it is caused by a germ of unvarying characteristics. The question also as to whether it is always derived from a previous case he also considers still unsettled, though this may not affect the practical point of avoiding contagion or infection. He also speaks with doubt in regard to its pathology. The fact that we find very few germs in the first stages of the disease is an important one in this regard. Whether the treatment directed to destruction of the typhoid bacilli in the intestinal canal is of great value is also doubtful, but he does think that clinical experience shows some advantage in intestinal antisepsis. It is useful to give a cathartic in the beginning of the treatment, and the choice is calomel, though castor-oil appears to be equally effective. During the course of the disease enemata will generally serve the purpose, and in convalescence the febrile rises will also be found connected with constipation. The general infection of the system is not parallel in all cases, but that it is extensive is indicated, among other things, by the recent discovery in regard to bacteriuria. Elevation of the body temperature is only a part of the fever and secondary infections may be a possible cause. The belief held by some that elevation of temperature is a salutary process, he thinks can not be maintained. The good effects of the cold bath treatment are not exclusively in its effects on temperature, and its effect in producing diuresis is one of the most important points in the treatment. We must remember, however, that the mortality is now lower than at any former period, and this may be partly due to more comprehensive diagnosis. Dock believes in the modified diet instead of the exclusively liquid one generally recommended, but the excretions must be carefully watched to see that what is taken is fairly digested. As regards medicines, he uses none except for special symptoms, the rare exceptions are stimulants, such as strychnin, and in less marked indications coffee; he has entirely abandoned alcoholics.

77. **Pulmonary Consumption.**—Flintermann reviews the facts in regard to the contagiousness and infectiveness of tuberculosis, and lays down rules for its prevention. Non-expectoration except in special receptacles, thorough cleanliness of rooms where numbers are gathered together, and sanitary inspection of homes. Tuberculous patients should be excluded from public hospitals and sanitaria and treated in special ones. Dispensaries are dangerous; public laboratories should be provided for the examination of sputa, etc. The dangers of bovine and milk tuberculosis are also mentioned, but he objects to compulsory notification of cases as useless and cruel.

78. **Early Diagnosis and Treatment of Phthisis.**—Duffield says that statistics prove that 60 per cent. of mankind are affected with tuberculosis, and its death-rate is actually from 15 to 18 per cent. He calls attention to certain early symptoms, such as the facial expression, inspection of the chest, scars of old strumous abscesses, physical signs, necessity of attention to the temperature and pulse, small rapid pulse in the young frequently being an early symptom. A large part of his paper is devoted to the treatment by tuberculin, or rather the watery extract of tubercle bacilli of von Ruck, which he thinks is of decided value. He has had twenty patients under treatment in the past fourteen months, and in all there is a marked improvement. He starts the treatment by giving .1 c.c. of Solution No. 1, containing .01 of 1 per cent. of solid extract free from water. He first administers .1 c.c., increasing every day or two until .5 c.c. is taken, then gradually increasing this until 1 c.c. is reached. The injection is made in the loose skin between the shoulder blades. After 1 c.c. is reached, it is continued for about a month, and then he takes Solution No. 10, which is ten times as strong, and, starting with .1 of 1 per cent. increases it by 1-20 until .5 c.c. is reached.

79. **Intestinal Wounds.**—Several cases of injuries of the intestines are reported by Wyman, and in conclusion he summarizes as follows: 1. A wound of the portal vein should be treated by ligation and suture of a part of the omentum to the peritoneum, so that collateral circulation can take place. To do this the free border of the omentum is dragged into the wound made to open the abdomen, and by intercepted sutures fastened to the margins of the peritoneum. 2. Hemorrhage from liver wounds, if not involving large arteries, may be controlled by gauze packing. Arteries may be controlled by cautery, clamp, forceps or ligature. 3. An effort must be made to preserve the contents of a wounded uterus. A temporary urinary fistula must be provided when the ureter or kidney is wounded.

81. **Cleanliness in Minor Gynecology.**—Skene insists on the importance of the utmost cleanliness in minor gynecology. It is far from easy to keep all the instruments and appliances surgically clean in ordinary office practice. On this account he has adopted the following method: Sterilized cotton kept in a clean vessel is used for sponges and thrown away afterward; wool is resterilized before use; pessaries, hard and soft rubber, are sterilized before using, as are also specula, sounds, forceps, etc., when they are applied in cases suspected of being septic or specifically contaminated. Instruments used in cases free from septic or specific contamination are simply washed in boiling water and dried with a sterilized towel. Vaselin is sterilized by heat and applied with a sterilized paint brush, and sterilized rubber gloves, disinfected each time after use, are employed in digital examinations. In order to insure great cleanliness he uses liquid soap discharged from the lower end of the soap bottle by a movable valve-stopper and running water for ordinary washing. He thinks the steam sterilizer has given him the most satisfaction for the sterilization of gauze, pessaries and towels. Instruments are kept in a sterilized towel, which he thinks is as advantageous as having them put in an antiseptic solution. For surgical cleanliness of the hands he uses a solution of carbolic acid, glycerin and water—5 per cent. of the acid and 25 of the glycerin. In conclusion he cautions about handling money, and he now picks up his fees with a forceps, drops them in a money box, and at the close of a day disinfects them at the same time his instruments are cleaned.

87.—This paper has appeared elsewhere. See THE JOURNAL of March 3, title 176, p. 549.

88.—See abstract in THE JOURNAL of Oct. 28,1899, p. 1104.

90. **Vaccination.**—Engelhardt reviews the statistics of vaccination. He doubts the existence of natural immunity. The length of immunity against natural infection is longer than that against vaccination. Scars are not reliable indications as to immunity. The only way to insure this is to be re-

vaccinated over and over again. As regards the time of vaccination, he thinks the hot months are most liable to produce complications. The infant is best vaccinated when it is from four to six months old.

91. **Scalp Wounds.**—Fowler notices the common statement in text-books, as to the refractory character of scalp wounds, and gives his experience, which is against this. He thinks the method of using hair to secure the edges of the wound pretty sure to bring on suppuration, and plaster is almost as bad. His own method is to shave away the hair for about one-half inch along each side of the wound, thoroughly cleanse it with warm carbolized water and close the wound with silk sutures, spray and seal with absorbent cotton, and collodion with .1 per cent. iodoform. The sutures should be inserted at least one-fourth inch away from the wound, as too close insertion in the dense tissue of the scalp may cause necrosis.

92. **Electricity and Gynecology.**—Grace considers electricity the most effective remedy in postpuerperal metritis. It is of value in uterine engorgement, in amenorrhea and scanty menstruation, especially in cases caused by constipation, dysmenorrhea and menorrhagia.

FOREIGN.

British Medical Journal, April 14.

Non-Diabetic Glycosuria. ROBERT SAUNDBY.—The occurrence and significance of glycosuria is discussed, and Saundby notices the pseudoglycosuria, where the copper reaction occurs, but which is prevented by repeated filtration through animal charcoal, which removes other reducing substances than sugar. The alimentary and physiologic glycosuria is also noted, and in some cases it may be rather persistent, according to the cases he reports. The other forms mentioned are alcoholic, hepatic, gastric, neurasthenic, and senile glycosuria. In many of these forms, however, there may be an alcoholic factor not given in the history. The author is inclined to think, however, that in many cases there is a disturbance of the liver that is not detected. Senile glycosuria is a symptom of the general tendency to break down, and care must be exercised in ordering strict diabetic diet. The object of his paper, in noticing these different forms of glycosuria, is to call attention to the conditions under which these symptoms may occur, so that the practitioner when meeting it may properly value it and possibly avoid serious errors in diagnosis.

Some Cirrhoses of the Liver. W. B. CHEADLE.—This author briefly mentions the drug treatment, three drugs being more reliable than all others, viz., mercury, potassium iodid and digitalis, the former two in cases with specific complication, the latter in those numerous instances where there is weakness of the heart. He condemns the use of purgatives as a pernicious and fatal practice, and diuretics as of little value. In some cases the limitation of fluids may be of use, but the only reliable way of relieving the condition of ascites is by paracentesis, and the earlier this is performed the safer it is as a rule. He also believes that in the majority of cases cardiac insufficiency, though it may be unrecognizable by the usual physical signs, is a factor in the causation of the more acute cirrhosis of the large alcoholic liver and its accompanying ascites.

The Lancet, April 14.

Typhoid Bacillus and Typhoid Fever. P. HORTON-SMITH.—This lecture by Horton-Smith deals with the Widal reaction. He points out that as the result of investigations by Gruber and Durham, as well as by Widal, credit belongs to three countries, Germany and England as well as France. The dilution to be used, the time limit and culture are discussed, and he thinks the facts show that 1/20 dilution with the time limit of one hour is a reliable standard. If the serum would suggest typhoid fever, producing clumping of the bacillus within one hour with a dilution of 1/20, it can rarely be due to the presence of Gaertner's bacillus or any other than the typhoid. In rare cases the test may be at fault, but the proportion is very small, not over 3 per cent. As to the nature of the agglutinating substance, he thinks the evidence points strongly to the view that the agglutinins are ferments not directly secreted by the bacilli themselves, but produced by the cells of the body and especially those of the spleen, lymph glands, and bone marrow, under the influence of stimulus produced by invading micro-organisms. The agglutination is a reaction of infection, but Horton-Smith does not fully accept the opinion of Emmerich and Loew that it has a connection with immunity. If this is possible, he says that if we picture to ourselves the delicate changes which occur in the blood of a patient during the course of typhoid fever, we should say that very early in the disease, as a rule during the commencement of the second week, agglutinative properties are in general acquired. But the date at which the agglutinins appear, the amount in which they may be present, and the length of time during which they persist are subject to extraordinary variations. The reaction is undoubtedly one of infection ,and its connection with immunity, though probable, has not as yet been proved. A little later in the disease bacteriolytic properties make their appearance, and with the gradual increase in their amount the further growth of the bacilli in the body is checked, and finally the latter are gradually digested and destroyed. But even now the disease is not quite at an end, for the toxins set free by the destruction of the bacilli have first to be dealt with. In part they may be neutralized by antitoxins, but of this we have as yet no direct evidence; in part they are probably excreted by the usual channels and thus eliminated from the body. In conclusion he calls attention to the methods of preventive inoculation, the results of which are encouraging.

Plague Viewed From Several Aspects. W. J. SIMPSON.—After noticing the history of the plague, Simpson says there are no productive localities, where it could be said to always exist, neither is it confined to low marshy regions. The present endemic center, Yunnan, China, is 5000 to 7000 feet above the sea. The general mildness of the plague in many places is not to be trusted in, as the ordinary behavior of plague in new localities is slow and insidious. In Calcutta it has existed since 1896, but it is only now that it is beginning to be an epidemic. He thinks the danger of infection from rats a real one, and calls attention to the special danger during the early and late stage of the disease for other countries. The symptoms and treatment are reviewed, and he thinks the only rational treatment is neutralization of the toxins and destruction of the germs The results so far with the protective curative serum are at least encouraging, and for preventive measures Haffkine's plague prophylactic is of the greatest importance.

Experiments on Intestinal Suture. WALTER EDMUNDS AND EWEN C. STABB.—These authors experimented with the following methods: Halsted's inflated rubber cylinder, Murphy's button and Laplace's forceps, each on seven dogs, and, as far as actual results go, the verdict is in favor of Halsted's cylinders. Their effect is to push back the mucous membrane, which otherwise always everts itself so much as to materially interfere with the suturing of the outer coats and the adaptation of the peritoneal surfaces. The cylinder also prevents the escape of the intestinal contents. They do not think the Murphy button entirely trustworthy without the external suturing, which they did not use in their experiments, and they do not recommend Laplace's forceps. In the seven dogs in which the Halsted cylinder was used, the intestines united circularly in all and the animals recovered. With the Murphy button without sutures, only five were successful, and of the seven with Laplace's forceps, four succeeded; all failures were due to non-union. They do not think the difference in the intestinal muscular coats in man and dogs invalidates their conclusions.

Presse Medicale (Paris), March 31, April 4 and 11.

Alcohol in France and Germany. DE LAVARENNE.—"France produces 311,952 hectoliters of alcohol a year, an increase of 282,760 in thirty years, and, with the colonies, drinks nearly all of this amount, which includes 192,866 hectoliters of absinthe. Germany produces much more alcohol than this, about 800,000 hectoliters more than France in 1897, and has 12,500 distilleries for the production of alcohol from potatoes alone. Part of this alcohol is exported. Part is consumed in heating and lighting, and part has contributed to the great development of chemical industries in Germany. The Germans took coal

and combining it with alcohol, changed it into gold." The world has been flooded since with German anilins, antipyrins, benzins, etc. The exports of chemical products amounted to $80,000,000 in 1897.

At What Age is Syphilis Contracted? E. FOURNIER.—Investigation of 11,000 private and over 5000 hospital patients, reported in this communication, strikingly confirms the assertion that syphilis is usually contracted very young. In men, by far the largest percentage is during the twenty-third year; earlier in the lower than in the middle classes. Among women the overwhelmingly largest percentage occurs between 19 and 21, on an average, but among girls of the lower classes between 16 and 20, and among prostitutes primary contagion is less frequent after 23 than before 15 years of age. Prostitutes over 23 seldom present the manifestations of primary syphilis, as they are usually past at that age. The figures show that 14 to 20 out of every 100 male syphilitics are infected while still minors, and the proportion is much larger among the females: in private practice, 31 out of every 100; in the hospitals, 48, and among prostitutes, 63, were infected with syphilis while they were still minors. The importance of protecting young girls is emphasized by these facts, and also the exceptionally great danger of contagion from young prostitutes.

Insomnia Due to Disturbances in Ocular Refraction. A. TROUSSEAU.—Ocular disturbances should be thought of when a young person is affected with insomnia at a period of excessive studying or other exertion, with headache on waking and better sleep after days of comparative rest of the eyes, as on Sundays. Trousseau relates a number of instances in which the patients had applied to physicians and neurologists in vain, and were finally cured in a few hours with appropriate eyeglasses.

Prophylaxis of Rheumatismal Endocarditis. E. BARIÉ.—Observations have been reported of the invasion of the heart by the rheumatism several days before the joints were affected, but they are rare. In such cases sodium salicylate is not given until the pains appear, and consequently its action on the heart is less than when given before the endocarditis occurs. Barié attributes the effect of the salicylate to its analgesic and antithermic action. As a prophylactic of endocarditis, he approves of doses of 4 to 5 gm. a day at intervals during the twenty-four hours, as long as the pains last, and 3 gm. for a week afterward. But his first choice is for an iodid medication, to prevent or check endocarditis under these circumstances. Sodium iodid with superalimentation and rest in bed, to prevent overexertion of the heart, has proved extremely successful in Potain's experience in arresting the affection, curing it completely in several cases. Recovery is most frequent in children.

Technique of Pylorectomy. H. HARTMANN.—The extensive experience of the writer has shown that cancer of the pylorus has very little tendency to extend toward the duodenum, probably on account of the lack of continuity between the submucosa of the stomach and of the intestine, which he has established, but is apt to invade the lesser curvature, and especially the ganglia in this direction. He first exposes the posterior surface of the stomach. The lesser omentum can be slit for this purpose without fear of hemorrhage—in the avascular middle portion. The great omentum should be opened close to the stomach, at the point where the incision is to be made, allowing access to the posterior cavity without danger of injury to the transverse mesocolon. The liver is drawn out of the way and the stomach pulled out to expose the coronary, which is ligated and cut. The viscus is then held with forceps as near the cardia as possible, and almost the entire lesser curvature is removed, leaving only the large expansion and a portion of the greater curvature. The gastroduodenal artery is then easily exposed and ligated in the angle between the first portion of the duodenum and pancreas. The operation is completed by freeing the pylorus, cutting the great omentum which holds it, and at quite a distance from the stomach, in order to remove with the tumor the subpyloric and retropyloric ganglia. After ligature of the gastro-duodenal artery these ganglia can be detached from the pancreas without hemorrhage, which is almost certain in operating by other methods.

Deutsche Medicinische Wochenschrift (Leipsic), March 29.

Treatment of Hemorrhages from Uterus. H. OSTERMANN.—Hemorrhage occurring with complicated endometritis is very difficult to cure; internal medication is apt to derange the digestive apparatus and local cauterization aggravates the endometritis. Ostermann announces that he has been unfailingly successful in curing these and all cases of uterine hemorrhages, aside from the puerperal, by the simple method of hot local applications of a mixture of equal parts of antipyrin and salol after the uterus has been wiped out dry. It is applied on cotton wrapped on an aluminum rod; the inner surface of the uterus smeared with the syrup-like fluid. Thirty observations are described, showing the great variety of uterine hemorrhagic affections amenable to treatment by this means. A large number were definitely cured by one application; others required two more at intervals of three to five days.

Medical Experiences in Arctic Regions. B. RAWITZ.—During the first part of Rawitz's stay on Baereninsel, the air was extremely dry; fish, meat, etc., dried in the open air very rapidly, and without a trace of decomposition. The men in the expedition were all robust, and their numerous scratches and other injuries, acquired in fishing and oil-trying, did not show a trace of suppuration, but neither did they heal. All had a red, dry surface, with healthy granulations, but no tendency to cicatrization. A long period of foggy weather followed and all the wounds began to suppurate violently, although the lesions were much less severe than at first, as the men had become more skillful in their work. As soon as the pus was evacuated, however, remarkably rapid healing followed. This absence of healing in aseptic conditions and the rapid healing when the air became septic, as manifested by the invariable suppuration, suggest to Rawitz that there may be some still unknown factor in healing processes, which bacteriology has failed to elucidate. He describes the cod-liver oil industry and states that the oil is mixed with that from the livers of other fish besides the cod, in many instances. It is derived from the livers by the cold process, that is, a keg is filled with the livers and left for three weeks, by which time the oil has been drained out without other heat than the sun, which shines day and night. The livers show no indication of decomposition. Oil drained by steaming the livers is of a poorer quality.

Muenchener Medicinische Wochenschrift, April 10.

Transplantations of Tendons Into Periosteum for Paralysis. F. LANGE.—Vulpius has a record of 80 transplantations, and Lange has performed the operation fifty times, but he modifies the usual method by implanting the tendon of the paralyzed muscle in the periosteum. A new muscle is made by combining paralyzed and sound muscle, and it is connected directly with the bone by implanting the tendon in the periosteum at any convenient point. The tendon is lengthened, if necessary, by cutting it in steps (Bayer), and shortened by running a thread lengthwise through it, doubling on itself like a hairpin; when the ends are drawn up tight, the tendon is made shorter and wider as it crinkles. The principal advantage of this method is the solidity of the result, as it is unnecessary to use an atrophied tendon, and also the latitude it allows the surgeon in locating the transplantation. Observations are described and illustrated showing the fine results attained in cases of a paralyzed hand, foot, knee or hip-joint. In the latter case the biceps and semitendinosus are united to the anterior surface of the femur, but as there is no tendon that can be utilized, an artificial one is supplied, made of strong silk braided in with the fibers of the muscles and brought down to the periosteum of the femur. It has filled in with connective tissue, in his three cases, and is now, after six months, the diameter of a pencil in one. In another the length of the artificial tendon was 15 cm. He considers tendon transplantation for paralysis, especially in children, and the use of the solid, light, inexpensive and durable orthopedic apparatus now made of celluloid, stiffened with steel wire, wonderful progress in the domain of orthopedics.

Asepsis Contra Antisepsis. O. LANZ.—Our instruments and dressings can be considered aseptic after the usual heat

sterilization, but the patient's skin, the surgeon's hands and the ligatures are still dubious links in the chain. Lanz has for years been using a receptacle for ligature silk, which he urgently recommends to insure against thread abscesses, while it saves silk and is extremely convenient in every way. The silk is wound in a loose oval ball, and placed in a glass or porcelain shell like a capsule, with a hole at each end for the thread. There are three holes near the edge of each half, allowing free access to the fluid, while by pressing the halves closer together these openings are closed. The silk nut, as he calls it, is sterilized with steam under pressure for a short time, and then boiled for a minute in sublimate, after being treated with ether and alcohol. It it then placed in a glass vessel with a overhanging telescope cover. This receptacle spreads out above the nut into a second wider chamber, and the lower, holding the nut, is closed with a watch-glass with a hole in the middle for the silk. The receptacle is filled with a solution of sublimate in which the end of the silk rests. He indorses Kocher's advice to scab over with iodin at once, even the slightest erosion. He also recommends disinfecting the hands immediately after any septic contact, as if for an immediate aseptic operation, to prevent the germs gaining access to the nails, etc.

Restriction of Aseptic Field in Operations. G. WALCHER.—It is a great mistake, Walcher thinks, to train young surgeons in the idea that expensive aseptic operating-rooms are necessary, as few are able to meet with similar conditions in their practice. He thinks that asepsis should be absolute, but limited to a small area, and outside of this area everything be considered dangerous. For a laparotomy, for instance, in his clinic or maternity, the table is covered with a clean sheet, and after the abdomen has been shaved and thoroughly disinfected with soap, ether and sublimate, the limbs are covered with towels lying in sublimate solution, as far as the mons veneris, and the trunk from the stomach down to the umbilicus, all fastened with aseptic safety-pins. This area alone is considered aseptic, with the hands and forearms of the operators and three dishes holding the instruments, dressings and sponges in a sublimate solution. Everything else, aprons, tables, napkins, etc., although clean, are yet considered septic, and any contact with them requires new disinfection. If a thread hits against anything in being handed over, it is thrown away and a fresh one substituted. The results of this restricted aseptic area seem to be highly satisfactory as only one death from sepsis has occurred in 8000 deliveries, and only two in the last 100 laparotomies, and in both of the latter there was preexistent infection.

Surgical Suture and Ligature Material. H. BRAUN.—The chief point in this communication is the author's recommendation of "collodion thread," that is, thread rendered impermeable for secretions and bacteria by being soaked in collodion. It has all the advantages of celluloid thread without its disadvantages.

The Catgut Question. C. LAUENSTEIN.—The seven principal methods of rendering catgut aseptic are described and compared, and Lauenstein considers that each is able to guarantee absolutely germ-free catgut. If infection occurs when catgut thus prepared is used, it must be attributed to secondary infection, either from the air or hands of the operator or from the skin or mucosa of the patient. For this reason each individual case must be studied to determine the most advantageous and appropriate manner of using the catgut in each instance. It seems perfectly rational from the practical as well as the theoretical point of view, to impart antiseptic properties to the catgut. The demonstrated possibility of rendering catgut absolutely aseptic, combined with its absorbability, ensure it the highest place in the equipment of the surgeon. It can only be surpassed by the discovery of an absorbable thread that does not swell in the living tissues nor offer a favorable soil for the development of microbes.

Pocket Sterilizer. BOFINGER.—A zinc box, 17½ by 9½ by 4 cm., holds the instruments usually necessary, in a folding duck case in the lid. The perforated trays hold a bottle for alcohol, and two small square alcohol lamps, with other compartments for syringe, etc. The legs are folded against the side when not in use. The instruments, etc., can be sterilized in the steam or laid directly in the boiling water in the bottom of the box, which boils in five minutes over the two lamps. With an ample supply of instruments the total weight of the box is about 2 1/5 pounds.

St. Petersburger Medicinische Wochenschrift. April 7.

Bacillus of Whooping-Cough. A. UCKE.—Reviewing the various communications that have been made in regard to the causal agent of whooping-cough, Ucke concludes that the majority of the authors, Czaplewski and others, have described one and the same bacillus, a very small rod with swollen ends, which can easily be mistaken for a diplococcus. Found in large amounts in fresh sputum, it may assist in differentiating the affection.

Gazzetta degli Ospedali (Milan), April 8 and 17.

Morphologic Modifications of Koch Bacillus; Their Prognostic Significance. S. MIRCOLI.—A number of experiences are related in detail, showing that in cases of latent tuberculosis and cases improved with serotherapy, the tubercle bacillus changed its shape and simulated the streptococcus in appearance, both in the clinic and in experimental research. The author concludes that these "streptococciform modifications" indicate a more favorable prognosis, as they are evidences of attenuated virulence. The chief modification is in the length; the bacillus becomes two, four or eight times its typical length, stretching out thin and long, and also shows granulations.

Circular Suture of Arteries by Direct Coaptation of Endothelium. A. SALOMONI.—The intima of each stump is exposed and the two parts brought together, with temporary hemostasis with fingers or forceps. The stumps are then sutured together with very fine silk, in a "knotted suture" including the entire thickness of the walls of the vessel. In a dog killed eighteen days after the abdominal aorta had been sutured in this way, the artery was found practically normal in every respect. The suture healed over with no contraction of the lumen of the vessel. "Coaptation of endothelial portions of the stumps prevents the formation of fibrinous deposits and ensures adhesion with the caliber of the vessel unaffected."

Case of Tabes Consecutive to Trauma. E. GASPARDI.—This is a typical observation of locomotor ataxia developing a few months after a stab wound in the brachial plexus, in a young man with no venereal history nor heredity, always very robust. The symptoms were particularly pronounced on the side of the lesion.

Action of Chloroform on the Blood. V. BACCARINI.—In the summary of this report of extensive experimental research the writer asserts that chloroform has an intense hemoglobinolytic action, also a cytolytic, but less pronounced, and it diminishes the respiratory capacity of the red corpuscles. The latter die sooner and in greater numbers than normally, especially the young corpuscles. This action lasts from a few hours to a few days, and is more pronounced as the narcosis is longer and deeper. Not all the modifications noted are to be ascribed directly to the chloroform, but rather to a circulus vitiosus, which it establishes.

Differences Between Pathogenic Action of Behring's and Tizzoni's Tetanus Toxin. G. TIZZONI.—First establishing that every tetanus toxin rapidly deteriorates with age, which accounts for the contradictory results obtained by different investigators, Tizzoni shows that there are evidently substantial differences in the constitution of his and Behring's toxin. The pathogenic action of his toxin is 3/5 that of Behring's in animals most sensitive to it—guinea-pigs—and 166 times as toxic for less susceptible ones—rabbits.

The Bicycle and Insanity. C. LOMBROSO.—As the result of extensive research Lombroso announces his conviction that the introduction of the bicycle has materially increased the number and the causes of cases of insanity. He admits that it has added much to the pleasures of life and put an end to the isolation of remote hamlets and farms, but at the same time its criminal influence is so great that the old formula: "look for the woman," should be changed to "look for the bicycle," in the majority of cases.

Societies.

COMING MEETINGS.

AMERICAN MEDICAL ASSOCIATION, Atlantic City, N. J., June 5-8.
Illinois State Medical Society, Springfield, May 15-17.
American Pediatric Association, Washington, D. C., May 7-9.
Ohio State Pediatric Society, Columbus, May 8.
Nebraska State Medical Society, Omaha, May 8-10.
Washington State Medical Society, Spokane, May 8-9.
Oklahoma Territory Medical Society, Oklahoma City, May 9.
Ohio State Medical Society, Columbus, May 9-11.
Kentucky State Medical Society, Georgetown, May 9-11.
Medical Association of State of Missouri, Mexico, May 15-17.
Medical Association of Montana, Butte, May 16.
Iowa State Medical Society, Des Moines, May 16-18.
Arkansas Medical Society, Jonesboro, May 14-16.
American Medico-Psychological Association, Richmond, Va., May 22-25.
Connecticut State Medical Society, New Haven, May 23-24.
Association of Military Surgeons of the United States, New York City, May 31 to June 2.
American Laryngological, Rhinological and Otological Society, Philadelphia, May 31, June 1 and 2.
North Dakota State Medical Society, Grand Forks, May 23-24.
Indiana State Medical Society, Anderson, May 24-25.
New Hampshire Medical Society, Concord, May 31 and June 1.

New York County Medical Association.—Dr. Charles E. Denison has been made treasurer, and Dr. J. W. Draper Maury, corresponding secretary of the Association.

Paducah Medical and Surgical Society.—The annual election of officers for this Society occurred at a recent meeting held in Paducah, Ky., resulting as follows: president, J. D. Robertson; secretary, J. E. Caldwell; treasurer, Horace Rivers.

Erie County Medical Society.—Officers were elected as follows, at the April session of this Society, held in Sandusky, Ohio: president, Charles Graefe; first vice-president, E. Stanley; second vice-president, M. J. Love; secretary and treasurer, H. C. Schoepfle.

Tolland County Medical Association.—The annual meeting of this Connecticut organization was held April 17, in Rockville. Following are the newly-elected officers: president, F. L. Smith, Stafford Springs; vice-president, T. F. O'Laughlin, Rockville; clerk, E. T. Davis, Ellington.

Windham County Medical Association.—This Association's 107th annual meeting was held at Norwich, Conn., April 12. The following are the newly-elected officers: president, S. B. Overlock, Pomfret; vice-president, Laura H. Hills, Willimantic; clerk and treasurer, James L. Gardner, Plainfield.

Medical Association of District of Columbia.—At the recent meeting of the standing committee of this Association, Washington, D. C., Dr. G. S. McLean was elected president and Dr. Clifton Mayfield secretary. The committee will continue its efforts, begun last year, to enforce the strict observance of the medical practice act of the District.

Austin Flint Medical Society.—The annual meeting of this Society was held in Waverly, Iowa, recently, and the following officers elected for the ensuing year: president W. A. Rohlf; vice-president, G. W. Appleby; secretary and treasurer, J. C. Powers of Hampton. Clear Lake was chosen as the place for the next meeting, to be held in July.

Conference of Health Officers.—The tenth annual conference of Indiana health officers will be held in Indianapolis, May 8-9, under the auspices of the State Board of Health. The meetings will be held in the Medical College of Indiana, the first session at 10 a.m., May 8. There will be a symposium on school hygiene, opened by a paper on "The School House," by Louis Gibson, and following this a consideration of the various phases of school hygiene and papers on various sanitary subjects.

Louisiana State Medical Society.—At the close of the annual meeting, just held in New Orleans, the following officers were elected for this Society: president, F. W. Parham; vice-presidents, C. J. Landfried, J. Callan, C. M. Smith, T. G. Ford, O. M. Patterson and R. C. Webb; treasurer, H. S. Cocram; recording secretary, H. B. Gessner; corresponding secretary, A. G. Friedrichs.

Texas Medical Association.—At the annual meeting of this Association held in Waco, Texas, April 24-27, it was decided to recommend that the state health authorities adopt the quarantine regulations agreed on at Atlanta and indorsed at New Orleans. The question of medical legislation was also given consideration, and representatives are to be urged to support the bill for the regulation of practice in the state.

Medical Society of the State of California.

Annual Meeting, San Francisco, April 17-19, 1900.

Dr. George Chismore, the President, presiding.

MEDICAL LEGISLATION.

DR. THOMAS ROSS, Sacramento, read a paper on this subject, in which he reviewed the work done by the profession and presented the status of the people and the states in their attitude toward the profession. He insisted on a higher and a better preliminary education than many medical schools have heretofore possessed, if we desire to raise the standard of professional attainments, for to be a competent physician to-day requires the highest order of attainment, untiring industry and unselfish devotion to the interests of the profession and the wants of suffering humanity. The examination for license to practice should only be open to graduates of colleges having a four-years course. These examinations should not be too technical but should fairly test the professional knowledge of the applicant. There should be one board of examiners only, and the examination should be the same for all, except that on materia medica and therapeutics. He thought that the fairness and liberality of the provisions of such a law would command the respect of the people, and would elevate the profession by excluding the illiterate from the study and practice of medicine.

PATHOLOGY AND TREATMENT OF ANEMIA.

DR. W. N. SHERMAN, Fresno, treated of the changes in composition, and the varying relation of the corpuscles, and their changes in shape, size and color. He spoke of the value of an early and frequent microscopic examination of the blood for diagnostic purposes. He classified anemias with reference to their origin, the primary forms including chlorosis, pernicious anemia, etc., and the secondary, resulting from nutritive disturbances in the blood, and the direct loss of blood by hemorrhage. The rest of his paper consisted in a consideration of chlorosis and idiopathic anemia. He entered rather exhaustively into the technique of both microscopic and chemical examination of blood. In regard to treatment of severe anemias, he placed rest as the most important measure, and cited cases where all therapeutic treatment failed, while, placed in bed for a time, patients respond quickly to medicine. Attention to the secretions, diet, and skin, and mental condition, are all-important. The great therapeutic agent in this disease is the Blaud pill, no other preparation of iron comparing with it. The next best is arsenic; the improved Blaud pill contains this article and is a very desirable combination. In severe cases oxygen by inhalation is good.

BUBONIC PLAGUE.

DR. HENRY A. RYFKOGEL, Oakland, presented a paper on the "Present Pandemic of Bubonic Plague." He considered the history of the disease, and gave a resumé of former epidemics. He also referred to the origin of the present pandemic and its progress; the plague in China; in Japan; in South America; in the Sandwich Islands; in Australia; in the United States; and gave a description of the specific bacillus, and discussed

the methods of carrying infection, and the possibilities of further invasion, closing with a few words on prophylaxis.

TUBERCLE BACILLI IN URINE.

DR. MAURICE W. BROWN, Alameda, referred to a class of pyuria in which tuberculosis of the kidney or bladder is probable. He spoke of the differentiation of tuberculosis of the bladder from tuberculosis of the kidney. In obtaining urine for examination, the smegma bacillus is the principal source of error, therefore disinfection of the prepuce and glans should be most thorough. He considered the microscopic technique for the demonstration of tubercle bacilli, and reported two cases of tuberculosis of the kidney.

PNEUMONIC COMPLICATIONS IN PHTHISIS.

DR. W. OPHULS, San Francisco, read a paper on this condition, which he thought most often due to aspiration of contents from pulmonary cavities. They differ according to whether they are due to simple tubercle bacilli infection, or to mixed infection of these bacilli with other pathogenic bacteria. These pneumonic complications have a great influence on the general course of the disease. The paper was based on the personal study of about sixty post-mortems.

BRONCHOPNEUMONIA.

DR. WM. FITCH CHENEY read a paper describing the nature of the disease and its dangers to life, the latter being: 1, mechanical, from obstruction, and 2, toxic, from infection. Probably the greatest menace to life is that of diminished air space from occluded tubes and collapsed sacs, which leads to deficient oxidation of the blood, and thence death from asphyxiation. Looking at the disease either from the standpoint of pulmonary obstruction or toxemia, our first duty in treating a case of bronchopneumonia is stimulation. The more stimulant furnished the patient the more opposition offered to the progress of the disease. Nutritious food should be given in sufficient amount, for there is no drug equal to food as a sustainer of life. Milk, peptonized if necessary, is the best diet, and at least two quarts should be taken in twenty-four hours for an adult. There is no objection to animal broths if the patient tires of milk, but milk gives a maximum of nutrition with a minimum of bulk, and always deserves first choice. Alcoholic stimulants are next in importance, and should anticipate symptoms of depression. Chief among stimulant drugs comes strychnin sulphate. 1. It acts as a stimulant to the respiratory center. 2. It increases the reflex activity of the spinal cord, exaggerates the impression conveyed to it by the mucus in the tubes, making the cough in turn more forcible and efficient, and so helps to cause elimination, or at least to prevent accumulation of the viscid exudate. 3. It acts as a direct stimulant to the heart, increasing the force of the contractions of the right ventricle, and so helping it overcome any obstacle in the way of its work. The dose, moderate, 1/30 gr. every eight hours as indicated, to once in six or once in four hours, for an adult. The only other drug advocated for routine administration in this disease is the carbonate of ammonia, for its stimulating rather than its expectorant qualities. The temperature must be taken at least three times a day, and the number of respirations and pulse counted frequently. The cough should not be interfered with unless it becomes troublesome. Dover's powder is the author's favorite remedy for this affection. Pain can usually be overcome by hot applications to the chest. He thinks the fever rarely becomes high enough to constitute a source of danger. He decries all high depressing antipyretic drugs, a high temperature usually meaning a wide area of infection and excessive productions of toxins, calling for additional stimulants rather than depressing drugs. He would rather recommend sponging of the extremities or entire body with equal parts of water and alcohol for high fever. Cyanosis demands stimulation, atropin and digitalin should be here added to the strychnin, and given hypodermically. Caffein is another useful drug. Oxygen should be administered continually until normal color is restored. The author closes his paper with some remarks referable especially to the treatment of this disease in infants.

MANAGEMENT OF LABOR.

DR. WM. J. G. DAWSON, St. Helena, in a paper on "A Few Practical Points in the Management of Labor," called attention to the ordinary duties of the obstetrician, to the use of unguents in dry labor; douches and chloroform in rigidity of the os, and referred to ordinary measures for protection of the perineum. He believes that modern teaching is somewhat responsible for laceration of this body, and that forceps are too frequently applied when not needed. He deprecates the modern method of external examinations only, and advocates repeated examinations during the first and second stages. In the third stage of labor he depends on uterine contractions for delivery of the placenta, and does not use the Credé method. He applies pressure over the uterus and traction on the cord, and keeps up firm pressure on the uterus by the hand as a preventative of postpartum hemorrhage.

UTERINE SCRAPINGS.

DR. HAROLD BRUNN, San Francisco, in a paper on the "Value of Microscopic Examination of Uterine Scrapings," referred to the frequent curettement, and the prevalent ignorance as to the pathology of the endometrium. He called attention to the similarity of the symptoms and microscopic appearance of the endometrium in benign and malignant diseases. gave the details of performing a diagnostic curettement, and preservation of scrapings, methods of mounting, and called attention to the relations between the pathologist and surgeon.

SHOCK.

DR. E. H. WOOLSEY, Oakland, read a paper citing cases of shock from a variety of causes, from mental emotion to grave injuries, including shock from cold drinks, renal calculi, catherization, intestinal perforation, rectal dilatation, etc. His remarks dealt chiefly with the tracing of the process from cause to effect; entertaining the view that the phenomena of shock are reflex effects.

SUBARACHNOID SPACE.

DRS. DUDLEY TAIT AND G. E. CAGLIERI, San Francisco, presented a paper on "Experimental and Clinical Notes on the Subarachnoid Space." This paper was awarded the prize, by the prize essay committee, and will appear in THE JOURNAL.

SURGERY FOR GALL-STONES.

DR. BEVERLY MACMONAGLE, San Francisco, presented a paper on "Some Surgical Methods of Treatment for Gall-Stones," the first method being the removal of the gall-bladder with gall-stones, with drainage. The second is to open the gall-bladder, remove the gall-stones, and attach the gall-bladder to the abdominal parietes, with drainage. The third method is to open the duodenum, dilate the opening from the common duct to the duodenum, and remove the stones, closing the duodenum and abdomen. A fifth is to open the gall-bladder, remove the gall, and close the gall-bladder and abdomen, without drainage. Dr. MacMonagle cited illustrative cases for each of these methods and considered the technique of each. He believes that the second meets the requirements of most operators.

DR. J. HENRY BARBAT said the removal of the gall-bladder is unjustifiable if the cystic duct is patulous, and gall-stones exist much more frequently than recognized. He recently removed 280 stones from the gall-bladder of a patient who had been treated for almost everything else.

DR. CLINTON CUSHING thinks it perfectly safe to remove the gall-bladder, and that it is of no more use than the appendix vermiformis.

DR. F. B. CARPENTER, San Francisco, thinks that if the gall-bladder is diseased, it should be removed. The common duct should be thoroughly examined before the gall-bladder is closed, in all cases in which it is incised.

APPENDICITIS.

DR. J. HENRY BARBAT, San Francisco, presented a paper entitled "A Few Notes on Appendicitis." This paper will appear in THE JOURNAL.

LIGATION OF INTERNAL JUGULAR.

DR. CHAS. G. LEVISON, San Francisco, presented a paper on "Ligation of the Internal Jugular Vein During the Removal of a Malignant Growth of the Neck." It discusses a case operated on by the writer, and followed five days after by death from a thrombosis of the jugular vein, lateral and sigmoid sinuses.

ABORIGINAL TREPHINING.

DR. PHILIP MILLS JONES, San Francisco, presented a paper treating of the methods in vogue in the Pacific Islands, within

historic times, and of the experimental work of the author. He exhibited some trephined skulls.

PROSTATIC CALCULUS.

DR. JOHN C. SPENCER, San Francisco, in this paper reviewed the pathology and etiology, dividing all cases into either essential or adventitious, and treating especially of the essential form. He cited the conclusions of many authorities as to the origin of the trouble, made suggestions as to treatment, and reported a case.

IS GONORRHEA CURABLE?

DR. M. KROTOSZYNER, San Francisco, read a paper expressing his opinion that gonorrhea is in many instances an incurable disease. Our diagnostic apparatus does not enable us, in some instances, to demonstrate with safety that the disease is permanently extinct. Everybody who has ever suffered from gonorrhea should permit a most careful examination in order to remove diseased foci amenable to our diagnostic apparatus.

Sacramento was selected as the next place of meeting. The officers elected for the ensuing year are president, Thomas Ross, Sacramento; first vice-president, W. J. G. Dawson, St. Helena; second vice-president, Wallace A. Briggs, Sacramento; secretary, George H. Evans, San Francisco; treasurer, E. E. Kelly, San Francisco.

Medical Association of Georgia.

The Fifty-first Annual Meeting, Atlanta, April 18-20, 1900.

Dr. F. W. McRae, President, presiding.

REPORT ON MEDICAL LEGISLATION.

The Committee on Medical Legislation reported, through its Chairman, Dr. W. S. Elkin: 1. In favor of making renewed efforts to secure the passage by the legislature of the two bills introduced last session, providing for privileged communications to physicians and patients and for expert services in the courts of the state. 2. In favor of so amending the by-laws that the committee on medical legislation shall consist of six members who reside at the capital of the state, instead of nine members from different parts of the state. 3. In favor of an appropriation from the treasury of the Association of $50 or so much thereof as may be necessary, for the use of the standing committee on legislation.

The report was unanimously adopted.

A PASTEUR INSTITUTE.

A committee was appointed to investigate the matter of establishing a Pasteur institute in Atlanta for the treatment of hydrophobia. This committee subsequently reported that it had investigated the matter and was persuaded that the establishment of such an institution would be a great benefit to suffering humanity, not only in Georgia, but throughout the entire South. It would also benefit the profession by furthering scientific investigations. As to the best method for raising the means to establish the institution, or whether it should be in connection with the Grady Hospital, or College of Physicians and Surgeons, the committee did not decide, and asked for further time, with power to act, such action to entail no financial obligations on the Association. The following resolutions were accordingly introduced and adopted:

Resolved, That the Medical Association of Georgia endorses the establishment of a Pasteur institute and laboratory in Atlanta and pledges its hearty support.

Resolved, That the profession will endeavor to secure through legislation 50 per cent. of the dog tax to support said institution when established.

HEALTH MEASURES, ETC.

A bill was framed, introduced, and adopted, creating a department of health and health officers in the state.

A committee appointed last year to confer with the medical societies of other states, inviting their co-operation in a memorial to Congress asking an increase in the rank, pay, and allowance of the Surgeon-general of the United States Army, reported favorably, and the report was adopted.

President McRae read letters from Senators A. O. Bacon and A. S. Clay in which it was stated that these gentlemen would do their utmost to defeat the Gallinger bill when it comes up for discussion and final disposition in the Senate of the United States.

CONTINUED USE OF ANTISEPTIC AND ELIMINATIVE TREATMENT OF TYPHOID FEVER WITHOUT ANY DEATHS.

DR. T. VIRGIL HUBBARD, Atlanta, read a paper with this title. The author has treated twenty cases of typhoid fever by the antiseptic and eliminative method without any deaths. Other men have treated a larger number without any, and the collective results give a mortality of less than 2 per cent. The physician who has never witnessed the contrast in the clinical picture of a typhoid patient on the eliminative treatment, as compared with the expectant plan, can no more appreciate its efficacy than a person born blind can appreciate the beauties of Nature. If he has never witnessed the prompt disappearance of delirium, the restoration to consciousness to the clouded intellect, prompt return of the appetite and digestive capacity, and gradual but sure reduction of temperature, he has in store for himself one of the triumphs of his profession, and a scene which will give him renewed confidence in the healing art.

TYPHOID FEVER, WITH REPORT OF CASES AND COMMENTS.

DR. W. B. HARDMAN, Harmony Grove, followed with a paper on this subject. He thinks the Brand treatment of the disease by plunge baths is impracticable, because it can not be used in the country or in small towns. He vigorously defended the Woodbridge treatment, and cited sixteen cases, with details, which he had personally treated the past year, using the Woodbridge method in each. Of the sixteen, only two patients died. In all of the others the temperature was brought to normal within fourteen days, and they were put on the road to convalescence. He does not follow the directions of Woodbridge to the letter, but uses his own judgment in modifying his instructions. Still, the principle of this treatment is adhered to, and calomel freely used in all cases.

SURGICAL CASES.

DR. WILLIS F. WESTMORELAND, Atlanta, reported a series of interesting surgical cases, and exhibited specimens. One was a case of carcinoma of the cecum; one a case of suprapubic cystotomy for stone in the bladder; one arthrotomy with excision of the head of the humerus for an old dislocation of the shoulder-joint. He showed typical specimens of osteomata.

BRAIN TRAUMATISMS.

DR. HOWARD J. WILLIAMS, Macon, read a paper on this topic. Except in the grosser lesions involving the motor areas particularly, localization of disturbed cerebral functions has generally been of but little practical value in indicating the point of the brain most importantly involved; he said: The reasons for this are: 1. In the large majority of brain traumatisms multiple lesions exist; many special functions are implicated and conflicting symptoms appear. 2. The general symptoms of cerebral shock, or of concussion, and compression usually so mask the symptoms pointing to special regions involved that important lesions can not be discovered. 3. The general depression common to various lesions may be so prolonged that when it is relieved, the symptoms pointing to special obtunded functions may be discovered too late to be of working value, secondary changes having destroyed the cells of the particular regions involved. 4. While in some regions of the brain a cerebral function is circumscribed, in other parts it is diffused over large areas. Here compensation of the obstructed functions is early taken up by unaffected cells, the functions are restored, and the significant symptoms have disappeared before the general depression has passed off; partial loss of power of the part affected may later become permanent when secondary changes have destroyed the involved area. Dr. Williams reported nine interesting cases.

SPLENECTOMY FOR CONGESTIVE HYPERTROPHY.

DR. J. WESLEY BOVÉE, Washington, D. C., reported "a successful case of splenectomy for marked congestive hypertrophy, with remarks." The principal reason, usually, for removal of the spleen is its enlargement, and this produces marked distress according to its size, the number and character of adhesions and the interference with the function of other organs. The sense of intolerable dragging when the tumor

is large often demands removal, provided other conditions permit it. This enlargement is usually due to paludal, tubercular or idiopathic causes, malignant disease, wandering of the organ, axial rotation, echinococcus and other cysts, chronic congestion, amyloid disease and injuries, such as rupture. Perhaps the most frequent cause of enlargement—leucocythemia—is the one condition in which the operation of extirpation should almost never be performed. More than one hundred cases of splenectomy for leucocythemia have been reported and in but three of them was it successful. Such results should be sufficient to put this indication for the operation practically beyond dispute. Some writers, however, believe the operation is justifiable when the relative proportion of red to white blood cells is not lower than fifty to one. In some cases perhaps this proportion may not be markedly dangerous, but we must remember the spleen does reach a tremendous size in leucocythemia, often weighing from twenty to fifty pounds and the adhesions may be formidable. In such cases, certainly, the fifty to one rule would be a very dangerous one were it not that in these very marked cases of enlargement, the ratio is usually greater than the one mentioned. It shows, however, the necessity of knowing the blood conditions. Nor should the proportion of red and white blood-cells be all we should attempt to learn in examination of the blood. It is well known that different varieties of both red and white blood-cells have different functions and that the relative numbers of these species of them vary quite markedly in different specimens of blood, whether taken from the same or different patients. This is certainly an element of great importance. Aside from this, it is of the greatest moment to know the hemoglobin percentage of the blood of a patient suffering from a leucocythemic spleen. If this be not far below the normal, as shown by the present inaccurate instruments, the prognosis of the surgeon is less grave.

Splenectomy is not an operation to be lightly entered on with scarcely any knowledge of the conditions demanding it and of those absolutely contra-indicating it. It is fully important to know when not to do the operation as when to intervene surgically. He reported a case in detail.

The following officers were elected for the ensuing year: president, Samuel C. Benedict, Athens; vice-presidents, R. M. Harbin of Rome, and V. D. Lockhart of Mayesville; secretary, Louis H. Jones, Atlanta. The next place of meeting is Augusta, the third Wednesday in April, 1901.

Philadelphia Pediatric Society.

March 13, 1900.

TUBERCULOUS CAVITY IN CHILD.

DR. D. J. M. MILLER presented a girl, 8 years of age, with a tuberculous cavity in the lung, with skiagraph. The child's father died of phthisis, and was constantly attended by her. One year after his death she first showed symptoms of the disease. As a rule cavities are not so frequent in children as in adults. In this case a residence of twelve weeks in a hospital brought about marked improvement. Within six weeks she gained six pounds. When first admitted she had night sweats and considerable fever.

SECONDARY ANEMIA IN CHILD.

DR. D. J. M. MILLER also presented a case of profound secondary anemia in a girl 2 years old, who had been under observation for three weeks. The disease probably originated eighteen months ago, with general increase in pallor and loss of appetite, but there was no diarrhea. The spleen and liver were slightly enlarged, but there was no lymphatic enlargement. There was slight tenderness over the tibia. First examination of blood showed: red cells, 3,984,000; leucocytes, 24,000; hemoglobin, 23 per cent. Several weeks later the red cells numbered 3,984,000, leucocytes 12,200, and the hemoglobin was 23 per cent. The condition therefore appeared to be one of chloro-anemia with moderate leucocytosis. There were no nucleated red cells.

DR. ALFRED STENGEL, in discussing the first case presented by Dr. Miller, said that the diagnosis of small cavities in the lungs in children is extremely difficult, since many of the physical signs present under normal conditions prevent the signs from becoming manifest. Thus a cracked-pot sound may be obtained in a healthy chest during the time the child is crying.

DR. F. SAVARY PEARCE thought the symptoms of the second patient pointed to rickets.

DR. ALFRED HAND thought the condition might be brought about by rickets, or by gastro-intestinal disturbances due to bad hygiene.

VALVULAR ENDOCARDITIS AFTER CHOREA.

DR. JOHN M. SWAN presented a case of chronic valvular endocarditis following chorea. The child was first seen in June, 1898, and was suffering from short cough, dyspnea and edema of the ankles. The family gave a history of rheumatism. In 1897 the child had been treated for arthritic troubles and later for chorea. The disease first began in the hands, then in the arms and legs. The tongue had manifested choreic movements. A soft murmur had been heard over the base of the heart, the pulse was accelerated and still later a double mitral murmur was transmitted to the axilla. The heart's action became tumultuous. There had been no albumin nor glucose present. The child was sent to the country but became worse, the feet and hands became swollen and ascites developed, followed by the appearance of albumin and casts in the urine. During the treatment the urine suddenly increased to a very large quantity, after which steady improvement set in and the child was able to get out of bed. Mitral regurgitation and also aortic stenosis were now detected. Hot baths were given daily, milk diet, digitalis, strychnin and Rochelle salts when needed. In February, 1900, the child weighed 60 pounds, attended school regularly and was able to do general housework. The pulse is now full and the rhythm regular. The apex is in the sixth interspace. The murmurs are not so distinct as formerly, and the urine is practically normal.

DR. F. A. PACKARD thought that probably the valvular leakage might in part be due to pericarditis which had been present.

TUMOR OF KIDNEY IN CHILD.

DR. J. H. MCKEE reported a case of large tumor of the kidney, occurring in a girl 6 years of age. There was no history of tumors on the father's or mother's side. The child had been healthy and strong, her only previous illnesses being measles and chicken-pox. Three months previously she began to lose flesh and later a pain in the leg developed. Still later there was abdominal enlargement, constipation, and cachexia. The abdominal enlargement was irregular on the left side, and dulness extended downward to the anterior superior spine, and in this region bulging was noticed. At one time a peristaltic wave had been detected, but there had never been much tympany. A nodular growth was also found in the region of the ribs. The urine contained no albumin, nor glucose, but some time later albumin was found, together with casts and red blood-cells. On October 4 an operation was performed by Dr. T. S. K. Morton, followed by temporary improvement, but death occurred later, probably from a recurrence elsewhere.

Detroit Medical and Library Association.

Detroit, Mich., April 9, 1900.

Dr. Carl Bonning, President.

SYMPOSIUM ON ENDOCARDITIS.

DR. W. M. DONALD considered the etiology and pathology, saying, in part: Valvulitis and endocarditis are synonomous terms. Three classes exist—acute simple, acute malignant and chronic. It is claimed that 20 per cent. of all cases of acute simple endocarditis result from rheumatism, but almost any of the infectious diseases may be a predisposing factor. Chorea must not be forgotten. Chronic valvular defects seem to be the predisposing cause of malignant endocarditis. Following this come pneumonia, meningitis, septicemia and erysipelas. The chief causative agent of the third form is a pre-existing acute endocarditis. Alcohol, syphilis, gout, overindulgence in rich food and severe exertion must also be considered as of etiologic value. In the first form the principal pathologic lesions are vegetations—granulation tissue capped with fibrin on the valves at their point of closest contact.

These vegetations are in time absorbed, leaving only a nodular thickening of the valve. In the second form the vegetations go on to necrosis, with frequently more or less ulceration, and even abscesses may form. Bacteria are present in large numbers, among which are the bacillus of pneumonia, and the staphylococcus and streptococcus pyogenes. In the third form, the edge of the valve is thickened and has nodular outgrowths. Advanced stages show curling up and retraction of the valve's edge. Adhesions may co-exist as well as calcification of the valves and surrounding tissues.

DR. W. R. CHITTICK presented the symptomatology, and said: The signs of acute simple endocarditis may be vague. A systolic murmur heard at the apex of the heart, indicating mitral regurgigation, is the sign most frequently met with, though not a settled question. The aortic valve may become involved and cause a double aortic murmur—a diastolic murmur being always organic. Accentuation of the pulmonary second sound, and dulness on percussion when due only to rheumatism are certain signs of endocarditis. The symptoms and signs of the second variety are precordial distress, pain, shortness of breath, dropsy, extreme pallor, great rapidity of the pulse, diastolic aortic murmur. A systolic mitral murmur with accentuated pulmonary second sound and evidence of engorgement of the right heart, with the presence of fever and other grave symptoms are characteristic. The spleen is enlarged and tender, and changes in the urine, paralysis, delirium, convulsions, headache, coma may follow. The symptoms often closely resemble those of typhoid fever. The symptoms of the third variety are usually shortness of breath on exertion, cough, and later dropsy. Palpitation, intermittent action of the heart and derangements of the digestive tract may occur. Blueness of the lips, ears, nose, etc., and enlargement of the veins of the cheeks and nose are often present.

DR. G. W. WAGNER considered the diagnosis and prognosis. If in the course of any acute infectious disease, especially rheumatism, a heart murmur is discovered, the time of its occurrence, its distribution, accentuation of the second sound and the changes in the heart's action which follows will usually indicate endocarditis. Chief among the points brought out were: In aortic lesions the stethoscope should be placed over the carotids in the neck, to diagnose the presence or absence of the second sound; the differentiation of aortic stenosis from certain changes due to anemia; of aortic incompetency from syphilis and degeneration changes; of mitral incompetence from accidental murmurs; the signs of mitral stenosis, and pulmonary stenosis and insufficiency. As to prognosis, we must base our conclusions on a careful study of the nature of the disease and degree of compensation present, as well as on the general condition of the patient, his occupation, habits, etc.

DR. F. L. NEWMAN took up the question of treatment. In acute endocarditis it should be directed toward limiting the course and effects by modifying the cause. The cardinal point is to quiet the restlessness of the heart by absolute rest in bed. In the sthenic cases, aconite is given; if there is pain, pulv. Doveri; in asthenic conditions, when the heart weakens, digitalis, strychnin, ammonia or ether—usually digitalis is not required until later on when valvular disease is supervening. As to local measures, authorities differ. Ice to the region of the heart is often very grateful to the patient. Belladonna plaster over the heart, by its very pressure, is soothing. In chronic endocarditis no treatment is necessary until symptoms of dilatation appear. Up to this time the patient should avoid anything that subjects the heart muscle to sudden strain. Drugs are prone to do harm during the stage of compensation. When the latter is only partially established and signs of cardiac failure occur, the patient must be put to bed and carefully nursed. In all forms of cardiac dilatation from valvular lesions, our sheet-anchor is digitalis. Strophanthus is next in importance. Strychnin is one of the best cardiac tonics. Caffein has a very uncertain action on the heart, but a very decided one on the kidneys. Nitroglycerin has no action on the heart, but decreases the resistance against which systole is performed. The doctor spoke of the action of heroin, gr. 1/12 every two hours for three times, as relieving a patient of his distressing cough and vomiting after all other regular means had failed.

New York Academy of Medicine.

April 5, 1900.

Dr. Wm. H. Thomson, President.

PREVENTION, MANAGEMENT AND EARLY DIAGNOSIS OF SCARLET FEVER.

DR. FLOYD M. CRANDALL presented this paper. Scarlet fever is peculiarly a disease in which much can be accomplished by prophylaxis. Sometimes children will be exposed quite thoroughly, even so late as after the initial vomiting, and still escape. In 90 per cent. of his cases, the period of incubation was between two and six days. The symptom-complex of vomiting, fever, rapid pulse and sore throat, when present, made it highly probable that the disease was scarlet fever. In his experience, the vomiting was the most constant symptom of all, and had often been violent and projectile. A pulse of 150 was not unusual at the outset. The so-called "strawberry tongue," i. e., a tongue in which the red papillæ show on a white ground, is not the true "strawberry tongue;" the latter, like the fruit after which it is named, has dark red dots or papillæ on a red and roughened ground. This kind of tongue is very characteristic of scarlatina, but unfortunately it is of so late occurrence that it is not of much diagnostic value. In estimating the progress of the disease, and when it will be proper to raise the quarantine, one should search with special care for desquamation around the fingers and on the hands. It is only in a very general way that the statement that the disease lasts forty days can be accepted. Another fact that should be borne in mind in this connection is that there is danger of contagion so long as there is any purulent discharge present as, for instance, a suppurative adenitis or otitis. The question of the advisability of closing the schools because of an outbreak of such a disease as scarlet fever must be decided by the character of the community. For example, in a large city like New York, the closing of the schools would bring the children more closely together, whereas in rural districts such a measure would probably keep them apart, and so tend to check the spread of the disease. When in attendance on a case of scarlet fever it is the part of prudence for the physician to wear, while in the sickroom, a cotton gown reaching from the head to the feet. This garment should be kept in the sickroom. People, as a rule, did not object to such a precaution, but, on the contrary, think all the more of a physician who is so careful about the welfare of others; moreover, if scarlet fever should break out mysteriously in another of the families attended by the same physician, the latter is not so likely to be censured, or suspected of having carried the contagion. During an attack, the anointing of the body surface with some bland oil not only prevents the dissemination of the disease but soothes the patient and often reduces the temperature. However if irritating antiseptics are employed, they are likely to do harm, and will most probably prolong the period of desquamation. Pruritus is relieved by a 5 per cent. boric acid ointment. Lard is objectionable because of its proneness to get rancid.

TREATMENT OF SCARLATINAL NEPHRITIS.

DR. ROBERT COLEMAN KEMP read a paper on this topic. He expressed the opinion that this form of nephritis is one peculiar to scarlet fever. It usually develops between the second and fourth weeks of the disease, and is a diffuse nephritis associated with general dropsy. The first sign is a sudden fall of the specific gravity of the urine, followed shortly afterward by a rise in specific gravity, a diminution in the quantity of urine and a deepening of its color. It is during this early stage that active treatment should be instituted. As a rule, albuminuria and anasarca do not occur until later. As oxygen is a good cardiac stimulant, and an aid to the elimination of toxins, it is a very useful remedy in scarlatinal nephritis. Its early use is the keynote of success here. Enteroclysis with saline solution at 110 to 120 F. will be found very beneficial. As a rule, it will cause the secretion of four or five times as much urine as the quantity of saline solution used.

DR. H. D. CHAPIN said that in recent years he had seen a much milder type of scarlet fever than formerly. In this city the most prolific causes of the spread of such diseases as scarlet

fever are the dispensary waiting-rooms and the crowding of school children's clothing in close wardrobes.

DR. C. G. KERLEY said that the most characteristic symptom of scarlet fever is the sore throat; the other symptoms may be exceedingly slight and easily overlooked. He has known the period of incubation, in exceptional instances, to be as long as twelve and fourteen days. He has found colonic washings at 110 F. the most successful treatment for the nephritis.

DR. J. E. WINTERS insisted that it was rare for physicians to meet with a fatal case of scarlatinal nephritis. Albuminuria is no more frequent in the early stage of scarlatina than in measles, and even when it does occur in those cases which subsequently develop nephritis there is invariably an interval in which no renal disease is present. It is worthy of note that scarlatinal nephritis occurs most commonly in mild epidemics, in the mild season of the year, and in dispensary and tenement house practice or among those children who are allowed to get out of bed too soon. It is invariably a glomerular nephritis, and it is always ushered in by a sudden rise of temperature. The indication for treatment is to diminish the quantity of blood going to the Malpighian tufts, and this he has found best accomplished by the administration of aconite up to its physiologic effect. Such treatment will speedily cause an increase in the quantity of urine, and associated with this will be an increased activity of the skin, so that abundant opportunity is afforded for the elimination of toxins. Enteroclysis with saline solution is useful in certain forms of nephritis, he says, but he is totally opposed to its use in scarlatinal nephritis.

Surgical Section, April 9, 1900.

RELATIVE BEARING OF CONJOINED TENDON AND INTERNAL OBLIQUE MUSCLES ON RADICAL CURE OF INGUINAL HERNIA.

DR. JOSEPH A. BLAKE read a paper based on twenty-five dissections he had made, and which went to show that the conjoined tendon never extends on the internal surface of the rectus for more than five-eighths of an inch, and that it is such a weak structure as not to be worthy of consideration in hernia operations. The main reliance must be on the external oblique.

STERILIZING CATGUT.

DR. C. A. ELSBERG presented "A Preliminary Report and Demonstration of a New Method of Sterilizing Catgut." The method is simple and inexpensive, and bacteriologic investigations prove it to be thoroughly efficient and reliable. The fat is first removed from the catgut by immersion for forty-eight hours in a mixture of chloroform, one part, ether, two parts. After this mixture has evaporated from the catgut, the latter is tightly wound in one layer on glass spools, and immersed for twenty or thirty minutes in a hot saturated solution of ammonium sulphate in water. When removed from this it is immersed and agitated for a few minutes in sterile water, or in a weak solution of bichlorid of mercury or of carbolic acid to remove the salt which tends to crystallize upon it. It is then sterile, and can be preserved in alcohol, or in the dry state. Such catgut has been found to be remarkably strong, soft and pliable, and yet is absorbed in the tissues in from four to eight days. If it is desired to chromicize the catgut it is only necessary to substitute a 1 to 1000 solution of chromic acid in water for the plain water used for making the saturated solution of ammonium sulphate. Catgut prepared by this new process has already been used by several surgeons with the greatest satisfaction.

Topeka Academy of Medicine and Surgery.

Topeka, Kan., April 2, 1900.

President—B. D. Eastman.

TYPHOID FEVER.

DR. S. G. STEWART read a paper on this subject, and laid special stress on some of the more common symptoms observed at the bedside. The disease is characterized by being an acute infectious disease transmitted chiefly by water and milk, the latter usually infected by washing the milk cans with infected water. The course is from three to four weeks, and frequently from one to three months. During the second week the rose spots in various degrees of severity make their appearance. The pathology is the most important part of the disease. Lesions may be extensive over the intestines. Some have been found in the duodenum and even in the stomach. There is no organ in the body that does not suffer from the arrest of nutrition. In making the diagnosis one must always take into consideration the degenerations in all parts of the body. If we had the ideal sanitary regulations we would have no typhoid fever. The typhoid cases in Topeka are in the people who drink well water.

Besides the poison from the typhoid bacilli, the system absorbs an additional amount from the decomposition of intestinal contents. Putting antiseptics into the intestines has been overdone. Iodin is used largely, as some think it increases nutrition, but if given for a long period it produces iodism. It is the same with many other drugs; if given too long depression results. Many are not so harmful, e. g., creosote, carbolic acid and salol. The latter is probably one of the safest and best. However much we put into the intestinal tract, we do not make it aseptic. We have very little to hope for from such medication. Opium should not be given to control the bowels, as it makes them more tympanitic. The doctor relies principally on fel bovini purificati. He reported a case of a family of twelve, all taken down with typhoid about the same time.

One of the family did hard work on a farm for several weeks, after being directed to go to bed and stay there. Finally he he came down with sharp pain in the right inguinal region. Dr. McClintock performed an operation and found peritonitis from typhoid perforation. Drainage was established and the patient rallied for a little over a week, when an abscess formed in the left lung and large quantities of gangrenous pus were expectorated. Then abscesses formed all over the body, and later the right lung became involved and the patient died after an illness of twenty-one weeks. Peptonized milk was used entirely. He especially emphasized the fact that one must not depend too much on chemical antiseptics, and must meet the indications as they arise.

DR. O. P. DAVIS spoke on the pathology of typhoid, and said that Dr. Osler and others describe general systemic typhoid without intestinal lesions. The characteristic lesions are found in the intestines, particularly in the region of the ileocecal valve. In the first week there is a condition of hyperemia and catarrhal symptoms, in the second a condition of hyperplasia, in the third necrosis begins, and in the fourth cicatrization. The scars in typhoid lesions are pigmented, and a diagnosis may be made some years after the disease. He described the bacteriologic examination of the feces, blood and urine. Leucocytosis is never present in the early stage of typhoid, but is found in some other infectious diseases.

DR. R. E. MCVEY spoke of the treatment. The trouble begins in the sympathetic nervous system, and so there are two factors to treat, the nervous system and the glands. The majority of patients are overtreated. He spoke of a patient being overdosed and having forty-six movements a day. He stopped all medicine when he took charge, and then gave bismuth. Recovery followed. He gives milk chiefly because it is absorbed by the veins, and does not see any use in pepsin or pancreatin. Acids are frequently of some use e. g., nitrohydrochloric. He does not object to exercise in the early stages, as it keeps up the tone of the muscular tissue, nor does he think a typhoid runs over thirty days; when the patient is ill longer it is sometning else.

DR. STEWART, in closing the discussion, said that the bacilli do live outside the body, but do not propagate outside. They will live for months and months in ice. The nervous system is affected by the degenerations.

Water treatment takes the place of any antipyretics. Sponge baths are better than opium, to treat delirium, restlessness, etc., He disinfects both the stools and urine, and never uses chemical antipyretics, for we lessen the chances of the patient's life when we lower the temperature with the latter. His advice is to sit down and study the case and meet the indications as they arise.

THE JOURNAL OF THE
AMERICAN MEDICAL ASSOCIATION.
61 MARKET STREET, - CHICAGO.

SATURDAY, MAY 5, 1900.

TRIGEMINAL NEURALGIA.

Pain may arise from irritative disturbance at any point in the course of a sensory nerve between the cerebral cortex and the periphery, and the exciting cause may be of most varied character—inflammatory, degenerative, toxic, organic, structural. The treatment must necessarily vary accordingly. To functional disturbances we shall make no reference further than to express the opinion that derangement of function always depends on, or at least is associated with, physical alteration of structure, although this may be of such an impalpable nature as to be beyond our present powers of observation. It is probable that under these conditions the alterations that take place may be looked upon as of a nutritional, chemical or toxic origin. These considerations are of importance in connection with the treatment of the group of disorders known as neuralgias, and than which no more painful affection exists.

At the recent joint meeting of the College of Physicians of Philadelphia and the Philadelphia Neurological Society,[1] the subject of "The Fifth Nerve in Its Surgical and Neurological Aspects" was taken up for consideration, by eminent authorities, and a number of important facts brought out. Among other things the first American case of tumor of the Gasserian ganglion and the third in the literature was reported, the new growth being an endothelioma. The patient survived two severe operations, but unfortunately obtained no relief, and in view of the nature and extent of the lesion recurrence is almost certain. In the next place a new operation for the removal of the ganglion was described, which commends itself for its simplicity, its bloodlessness, its ease of execution and its effectiveness. This consists in resection of the zygoma, turning back of the temporal muscle, trephining of the temporal bone, retraction of the middle meningeal artery, and exposure and removal of the ganglion, without the necessity of entering the meningeal cavity. The operation has already been performed successfully in four cases that were reported.

The discussion failed, however, to settle conclusively the ultimate pathology of tic douloureux and no evidence was put forth to show that the disease may not be due to disease of the cortico-medullary neuron. The tendency for the pain to return after removal of the nerve-trunk or even of the ganglion, and to appear in a second nerve after one previously affected has been resected would seem to indicate that, in some cases at least, the source of pain is beyond the ganglion. Of the utility of operation, peripheral or central, sufficient evidence was afforded, but no assurance of success can be predicated in advance of the operation. As in other matters, time alone is here the final arbiter. The suggestion that instead of removing the ganglion division of the root of the sensory portion of the nerve, between the pons and the ganglion, should be practiced, is worthy of serious consideration.

Considering that the discussion was from a surgical standpoint, little was said of medicinal treatment, although it was pleasant to hear that occasionally spontaneous disappearance takes place. Nevertheless, it would seem axiomatic that all ordinary therapeutic resources should first be exhausted before surgical intervention of any sort is undertaken; and then it will be wisest to first attempt the simpler operation of stretching or resection, reserving the more radical procedure of excision of the ganglion as a final resort.

[1] The papers presented at this meeting appear in this and last week's JOURNAL.

BLEEDING IN THE TREATMENT OF UREMIA.

It is probable that bleeding will never be employed again to the extent it has been in the past, but the question is frequently raised whether it is at present being practiced to the degree that its efficacy makes it worthy of. There can be no doubt that there are certain conditions that nothing will relieve so promptly and so certainly as does free venesection. One of these consists in the state of venous stasis resulting from failure in the activity of the right heart, whether due to degeneration of its muscular wall or secondary to similar failure on the part of the left heart or to pulmonary obstruction or to regurgitation through the tricupsid valves. Probably some conditions of local hyperemia or stasis, as of the brain or the lungs or the kidneys, may be relieved by the same measure. Then there is reason to believe that various toxic states, such as diabetic coma or uremia, or such as sometimes occur in the course of infectious diseases, can be ameliorated by free bleeding, and the results are probably even more satisfactory when subcutaneous infusion is practiced at the same time. By the bleeding it is hoped to remove from the circulation certain noxious substances that have failed of elimination through the natural channels, either because of their production in excess or because of deficiency in the functional activity of the emunctories; and by the infusion to maintain the mechanical integrity of the circulation, and perhaps also to effect dilution and elimination of toxins remaining in the tissues. It is a question, however, whether sufficient of the poisonous matter can be removed by even a free bleeding to bring about a distinct effect on the general condition, although it may be that when the system is partially relieved it becomes capable of ridding itself of the remaining incubus.

After all has been said, however, the fact remains that a satisfactory explanation of the mechanism by which the therapeutic effects of bleeding are brought about has not yet been forthcoming. In view of this fact Richter[1]

[1] Berliner Klin. Woch., Feb. 12, 1900, p. 138.

undertook a series of experiments with the object of deciding the question in so far as it concerns uremic intoxication. He points out that uremia may be accepted as an indication of renal insufficiency. Now, it has been shown that this latter condition is attended with retention in the blood, of the molecular products of disintegration, with increased molecular concentration. Increase of the osmotic pressure, as indicated by a reduction in the freezing-point of the blood, may under certain circumstances be considered the index of deficiency in the activity of the renal function. It has, however, not yet been demonstrated that this increase in osmotic pressure is the cause of the uremia. In fact, on the one hand, increased molecular concentration of the blood in cases of disease of the kidneys may be unattended with uremic manifestations; while, on the other hand, it may be wanting in the presence of profound uremia. It is thought that increase in the osmotic pressure and the poison that gives rise to uremia have a common origin, namely, the proteid molecule. Richter has found, however, that profound uremia is almost invariably attended with increased molecular concentration of the blood. He undertook, therefore, to determine how the latter would be affected as a result of venesection, with or without subsequent subcutaneous infusion, in animals in which renal insufficiency was induced by previous treatment with substances capable of exciting nephritis or which had been subjected to nephrectomy.

It has been shown that the normal molecular concentration of the blood is not influenced by bleeding alone. It was found, further, that the renal insufficiency that was developed slowly and gradually as a result of cautious administration of renal poisons, such as cantharidin and aloin—as indicated by increased molecular concentration of the blood—was not influenced by bleeding. A distinct parallelism was observed between improvement in the nephritic process and the degree of molecular concentration of the blood. With the disappearance of the symptoms of nephritis the reduction in the freezing-point was restored to the normal. Also, when the molecular concentration of the blood was rapidly increased by the administration of renal poisons capable of inducing acute toxic diffuse nephritis, no noteworthy diminution in osmotic pressure was observed after bleeding, with or without subcutaneous infusion.

Although these observations fail to supply an explanation of the mechanism by which bleeding affords relief in cases of uremia the results obtained clinically by this measure are not therefore to be impugned.

DANGERS FROM FORMALDEHYDE.

The local newspapers have, within the past few days, contained accounts of accidents from disinfection by formaldehyde gas, and it was said that a number of the employees of the Chicago Health Department were suffering from its effects. In one case insanity was reported as the result. A careful inquiry reveals that the reports were somewhat exaggerated, and that in no case was serious permanent injury received so far as known. The method used in Chicago is that of spraying on sheets, and there are certain dangers connected with the use of formaldehyde in this way especially to those who, as public disinfectors, are compelled to repeatedly expose themselves to its vapor, but these are chiefly confined to the disinfection of large spaces that necessitate a comparatively prolonged stay in the gradually vitiated atmosphere; in ordinary-sized rooms, they are minimal if they exist at all. There is also a certain inconvenience from the temporary irritation of the air-passages, and catarrhal affections from these are common from this cause. The skin must also be protected, as exposure produces a troublesome eczema that sometimes leaves a permanent thickening. In two cases a temporary mental derangement, lasting for a few hours, has been observed, and a dazed condition for a brief period in others after excessive exposure. In one case complete unconsciousness for a number of hours followed the accidental douching of the head and face with the formalin solution, but left no permanent ill effects. There are reports also of alopecia having occurred from this cause, though the Chicago health officers have had no such experience. So far as known all the accidents have occurred to those who have had to expose themselves professionally as disinfectors; none are reported to others.

These facts show that formaldehyde is an agent that must be handled with some care, and that while the sheet method of disinfection has its advantages, it also has its perils when applied to very large spaces, such as storehouses, large hospital wards, dormitories, etc. The fact, however, that the Chicago Health Department's officials have made many thousand disinfections with but few such accidents, and without serious permanent injury to anybody, shows that these may be exaggerated, and experience will probably develop some appliance that will reduce them to a minimum. Perhaps also some form of generator may be produced that will be as efficient as the sheet method, although, according to the Chicago experiences, this is still a desideratum. Like every other powerful agent used in medicine for good, formaldehyde needs careful handling, but the fact that with all its powerful toxic action on the nervous system, as well as its action as a local irritant, no permanent injury has been received from it by any one, is strongly in its favor as a comparatively safe disinfectant.

THE MASSACHUSETTS GENERAL HOSPITAL.

The eighty-sixth annual report of the trustees of the Massachusetts General Hospital is an interesting document, as this hospital shows a high grade of organization in all its various departments and has excellent plans for increasing its usefulness in the future. Without going into unnecessary details, mention should be made of certain things that must be of great interest to medical men. Thus we find that the library of the hospital maintains a healthy growth; it now contains something

over 5000 volumes. The trustees have assumed the expense of publishing reports of the clinical meetings of the staff and steps have been taken for the immediate publication of important investigations in clinical pathology. The clinical-pathologic laboratory of the hospital has successfully demonstrated its increasing usefulness in the general work of the institution, and its needs as outlined by its directors have received full recognition. From the report of Dr. Wright, the director of the laboratory, we learn that the existence of the latter is due to a special fund raised by friends of the hospital. He calls especial attention to the need of such laboratories in order to bring the work of hospitals up to the standard, and he emphasizes also the scarcity of properly-equipped special ones of this sort in this country. While we have a multitude of public and other hospitals, there are probably not over half a dozen laboratories in connection with them worthy of the name. And yet it is safe to say that if the medical staffs of hospitals of fair size will make determined efforts toward securing properly-equipped laboratories and competent pathologists the efforts will be successful. It is generally acknowledged that the strength of Germany and other European countries in medicine, in the broad sense, rests largely on the prominence given the laboratory as a necessary department of a large hospital.

While such laboratories are primarily designed as aid to the medical and surgical work of hospitals, they are also means of advancing knowledge of the subjects with which they deal. The number of interesting and important special studies pursued under Dr. Wright's charge, makes a decidedly creditable showing and clearly demonstrates how such laboratories help to make hospitals useful in the widest sense and factors of great consequence in building up medical knowledge. The trustees of the Massachusetts General Hospital are to be congratulated on the foresight and wisdom they show in fostering laboratory work, and in connection with the other work of their hospital, and it is to be hoped that other hospitals will soon follow the good example they have created. Let it be thoroughly understood that a hospital of any size, without a properly-equipped laboratory in the charge of a competent director, is not doing and can not do its full duty to its patients, to its supporters, and to humanity at large, and the present unsatisfactory condition of things will change for the better. Endowments and appropriations for this good purpose can be secured elsewhere as well as in Boston. The way in which such matters are conducted is a good index of the intelligence and the spirit of the man, medical and non-medical, in a community. It goes without saying that in no way can the medical profession better strengthen its own cause than by securing as many complete and well organized hospitals and similar institutions as possible. There is abundant room for advance in the mere organization of the work of the staffs of many of our hospitals, and in the scramble for position this important work has been much neglected in the past.

THE OHIO MEDICAL PRACTICE ACT.

The passage of the Love bill, by the Ohio legislature, is evidence of the influence that the medical profession can exert in a state when it is duly aroused. There was a vigorous and determined opposition to the movement for medical reform, and an active lobby working against the bill. The newspapers, or at least a large part of them, threw their influence against it, and all the forces of quackery—osteopathy, "Christian Science" and other kindred delusions—were worked their utmost for its defeat. The osteopaths were especially energetic in their endeavor to legalize their practice, but their bill failed to pass and the most they could get was admission to practice on passing examination in the requisite branches. We doubt whether the Kirksville, Mo., institution will turn out many qualified practitioners for Ohio, unless it mends its ways. The power of the 8000 physicians in Ohio was made to be felt by the politicians, and the result should encourage those in other states where medical reform is needed. The unfortunate movement of the medical students—also previously noted in THE JOURNAL—which appeared to possibly threaten the success of the bill, also came to nothing practically, and the legal status of the medical profession in Ohio, as a contemporary[1] puts it, "is in better form than ever before in the history of the state."

A MALARIA EXPERIMENT.

The British Government, it is said, is about to inaugurate an interesting experiment of a kind that ought to make the antivivisectionists indulge in one of their customary howls. It is directly in the line of human experimentation, and as condemnable in its way as some of those that have recently given these philanthropists so much concern. It is proposed, so the report goes, to build a hut in the most pestilential spot of the malarial Roman Campagna, make it mosquito proof with screens, etc., and have two medical experts live there during the unhealthy season of May to October. The antivivisectionists may not object to this so far, but the subjects of the experiment are to have servants to wait on them and be exposed to the same risks without having the stimulus of scientific zeal or the hope of honor or reputation. If these four persons do not acquire malaria, it will prove that it is avoidable with proper precautions. As a further proof it is proposed to breed the malaria-bearing mosquitoes, feed them on infected individuals and then transport them to England and have them there inoculate individuals who have never been otherwise exposed, who are expected to develop the disease. If this report is correct, no one can really deny the possible value of the experiments, but the humane societies will probably have their say about it, and would prefer to have mankind go on the good old way and get bitten, "as Nature intended."

THE SUPERVISION OF MEDICAL COLLEGES.

The Superintendent of Public Instruction, of the State of Michigan, recently appointed Judge A. J. Mills, of Kalamazoo, and Dr. F. F. Pitcher, of Detroit, as a commission to visit and report on the medical colleges in the state. They have made their report and, while

[1] Cincinnati Lancet-Clinic, April 21.

they put the stamp of their disapproval on the policy of chartering private medical colleges, they suggest certain regulations to be followed in case such a policy is continued. Among these are a fixed standard of preliminary qualifications and graduation and examinations by independent boards for both, the assurance of the financial responsibility and adequate teaching resources of the institutions, and a constant and thorough inspection of them by competent official visitors. They further recommend the refusal of charters for medical colleges in small towns where the medical, clinical and hospital facilities are not ordinarily found. These suggestions are sensible and should be also practical, and, if followed out, will certainly tend to improve matters. This country is suffering from a surplus of medical education, the quality of which is often correspondingly deteriorated. While a certain proportion of our medical colleges are approximately what they should be, there are many that could well be spared, and some of the genuine "cheap and nasty" type. Yet they all turn out M. D's. and, so long as they exist, there will be a surplus of doctors, such as they are. The filtering process of state examinations, if sufficiently rigid, will help matters, but it would be a still further advantage if we could purify the fountain-head by strict state supervision, as proposed by this Michigan commission.

ALCOHOLISM IN MEXICO.

According to an exchange,[1] which from contiguity might be expected to be well informed, alcoholism is making startling strides in Old Mexico. The alcohol habit, it says, is reported to be rapidly spreading to all ranks of Mexican society and the mortality statistics which come from the superior or national health board show, for each year, a steady increase in the number of deaths from cerebral congestion due to alcoholism. The national government has, it is said, become alarmed at this showing, and the increase of poverty and crime that goes *pari passu* with this cause. This increase of alcoholism among the Latin races has also been reported elsewhere, and if we include France among them, it has become one of the more serious problems of their civilization. When the local alcoholic drinks heretofore prevalently used among them are supplanted or supplemented by those of the Anglo-Saxon, the danger-point is brought within the vision of those who had before ignored it. It is an unfortunate fact that wherever the northern races go they carry their vices with them, and the American and English bar is one of the most active factors in their conquering advance. Mexico will do well for herself if she puts a check on the development of this special feature of modern civilization.

PROVISION FOR CONSUMPTIVES.

In view of the influx of indigent consumptives into Colorado, some benevolent gentlemen of that state are reported to have projected a novel sort of institution which will combine the characters of a consumptive sanitarium and a self-supporting farm colony. It is needful they claim, in order to obtain the full benefit of the Colorado climate, to exercise the body and fully inflate the lungs with the rarefied air, hence outdoor occupation is desirable. The design is therefore to furnish light employment which will enable the not-too-far-gone consumptive to maintain himself while obtaining at the same time the full benefit of the aseptic and stimulating atmosphere. The promoters of the proposed establishment therefore are aiming to secure land near Denver, which they propose to lay out in market farms and gardens for the use of weak-lunged patients. The plans as given out are not detailed in full, but it would seem that the colony idea is most prominent, though the hospital or sanatorium feature will probably not be neglected. The intention is said to be to furnish a means whereby a man or woman can secure the best accommodations and medical attendance at moderate cost, and can, if they are able, earn enough or more to pay their expenses. As yet the project is only embryonic, but it is to be hoped that it may develop and mature to meet the fullest expectations of its projectors. If successfully carried out it ought to be a most beneficent aid to a large number of sufferers, and may also help to relieve the congestion of the cities of the state by needy consumptives. The chief mover in the enterprise is, apparently, the state secretary of the Y. M. C. A., W. M. Danner, who estimates that about $100,000 will be required to carry out the project. He thinks that as patients are sent from all parts of the country it is only fair that other regions thus contributing should respond to the appeal.

[1] Texas Medical News, April.

PATHOGENESIS OF EXOPHTHALMIC GOITER.

Two views in particular have prevailed in the past with regard to the pathogenesis of exophthalmic goiter, according to which the symptoms were considered dependent on disease of the cervical sympathetic, or of the medulla oblongata; but no constant lesion has been found, and such as have been discovered have been present also in association with other conditions. It has been shown experimentally that section of the cervical sympathetic is attended with dilatation of the blood-vessels of the head and neck, retraction of the eye-balls, drooping of the eyelids, contraction of the pupils; stimulation of the central extremity, with contraction of the blood-vessels, protrusion of the eyeballs, retraction of the eyelids, dilatation of the pupils; and stimulation of the peripheral extremity, with increased action of the heart. For the development of the symptoms of exophthalmic goiter through the agency of the cervical sympathetic it would therefore be necessary for some fibers to be in a state of paralysis, and others in a state of irritation. Certain other nervous, respiratory and circulatory symptoms would, however, be left unexplained on the assumption of disease of the cervical sympathetic solely, while within a small area on the floor of the fourth ventricle are situated structures—the vasomotor, the cardiac accelerator, the pneumogastric, and the diabetic centers—derangement of whose function would give rise to many of the symptoms of exophthalmic goiter. It has been further demonstrated experimentally, that division of the restiform bodies is attended with acceleration of the heart, exophthalmos, vasomotor paralysis in the ears, neck and thyroid gland, widening of the palpebral fissure, infrequency and incompleteness of winking, and sometimes enlargement of the thyroid gland. More than fifteen years

ago it was found that improvement in the symptoms of exophthalmic goiter followed partial or total removal of the thyroid gland, and the operation has since been repeated successfully in a considerable number of instances. It was not, however, until some years later that the conclusion was reached that the manifestations of exophthalmic goiter are probably dependent on deranged functional activity of the thyroid gland, as a result of which either toxic substances are sent into the blood or toxic substances present are not neutralized by an internal secretion of the thyroid gland. Subsequently, however, hypertrophy of the gland was found, and it was definitely concluded that the symptoms of the disease were dependent on intoxication resulting from excessive secretory activity of the thyroid gland. Further, it was learned that similar manifestations could be induced artificially by the excessive therapeutic administration of thyroid gland. More recently resection of the cervical sympathetic nerve has been practiced in some cases of exophthalmic goiter, with reported success. Additional confirmation of the view that the cervical sympathetic is involved is afforded by some observations recently made by Haskovec,[1] who found, experimentally, that acceleration of the action of the heart takes place after injection of thyroid extract when the vagus is divided and when also the peripheral extremity of the nerve is paralyzed by atropin. The cardiac acceleration failed to take place, however, when thyroid extract was injected after division of the spinal cord at the junction of the cervical and dorsal portions, and also after excision of the cervical sympathetic. The only reasonable conclusion to arrive at from the available evidence is that exophthalmic goiter is a constitutional thyroid intoxication expending its force especially on the sympathetic nervous system and the medulla oblongata.

BACTERIOLOGY OF LOBAR PNEUMONIA IN TYPHOID FEVER.

While the bacillus of typhoid fever has been repeatedly isolated from the consolidated lung in typhoid fever, it has not been successfully demonstrated in the sputum during life, though sought for by competent men. It is therefore of interest to note that v. Stühlern[1] was able to secure this organism as well as the micrococcus lanceolatus in pure culture from the sputum of a typhoid patient in whom consolidation of the lower left lobe developed on the tenth day of the disease. Bacteriologic examination of the blood gave negative results. In a second fatal case of pneumonia developing in the fourth week of the fever, cultures of typhoid bacilli, micrococcus lanceolatus, and staphylococcus were obtained from the sputum and from the fluid aspirated from the affected lung. In this case also the blood remained sterile, but the urine contained typhoid bacilli. Thrombosis of the femoral vein developed, and after death typhoid bacilli and staphylococci developed in cultures from the thrombus. Bacilli like the typhoid were found also in the sections from the pneumonic lobe. In a third case of this kind, examined bacteriologically post-mortem only, typhoid bacilli and diplococci were demonstrated in the lung. An important fact in connection with the two first cases is this, that the sputum was decidedly hemorrhagic, and in the third case the affected lobe was hemorrhagic; v. Stühlern states that Curschmann has observed that the sputum is hemorrhagic in pneumonia complicating typhoid oftener than in pure pneumonias. Hence it would seem that perhaps this peculiar feature of pneumonia in typhoid is in some way dependent on the typhoid bacilli being present in the consolidated districts. It is to be remembered, however, that the hypostatic congestions of the lungs in typhoid may be the reason for the hemorrhagic sputum. At all events the fact remains that the sputum in typhoid may contain typhoid bacilli—an additional spur to the most careful disinfection of all the external secretions of typhoid patients. Indeed, it is just as essential to disinfect urine and sputum as it is to disinfect the feces on which formerly was laid so much stress. Perhaps more attention should be paid to perspiration also than has been given it.

[1] Wiener Med. Woch., January 6, p. 65.
[1] Centralbl. f. Bact.. Abth. i, 1900, xxvii, 354.

Medical News.

WE RECENTLY mentioned that the Paris Académie de Médecine had voted in favor of adding measles to the list of diseases required to be reported. "Infectious pneumonia and bronchopneumonia" are now on the list.

NEW MEDICAL JOURNALS.—Three new publications have just appeared: the international journal, *Lepra*, with articles in English, French and German, founded by James Nevins Hyde, Dehio, Ehlers, Hansen, J. Hutchinson and Neisser (J. A. Barth, Leipsic); a journal, published by Fraenkel, Gerhardt and von Leyden, devoted to questions concerning tuberculosis and sanatoria (Veit & Co., Leipsic); a third, a quarterly devoted to the scientific, unprejudiced discussion of the alcohol question, published by Baer, Boehmert, Strauss and Waldschmidt (Boehmert, Dresden).

THE HOSPITAL SHIP "MISSOURI."—This ship, which for two years has done excellent service, first between Cuba and Porto Rico and the home ports and afterward between the Philippine Islands and the United States, has terminated her connection with the medical department of the Army. She has been transferred to the quartermaster's department, on the recommendation of the surgeon-general, as the Army Transport Service is now so well conducted that sick men can be brought across the Pacific in comfort on the vessels of this service.

RETIREMENT OF COLONEL ALDEN.—Colonel Charles H. Alden, assistant-surgeon-general United States Army, who has been chief assistant to the Surgeon-General for the past seven years, was retired April 28, on account of having attained the age of 64 years, the age limit for active service. Dr. Alden was appointed an assistant-surgeon with the rank of first lieutenant June 23, 1860. Five years later he was promoted to a captaincy and, July 28, 1866, he was made a major and surgeon. He received his promotion to a lieutenant-colonelcy in November, 1888, and to a colonelcy in 1899. On the evening of April 25, last, a dinner in honor of this officer was given by the medical officers of the Army stationed in Washington, D. C., and at neighboring posts. On the evening of the day of retirement a reception was given by the Surgeon-General of the Army and Mrs. Sternberg, at which the medical profession of Washington had an opportunity to congratulate Colonel

Alden on the close of his long career of active service. This retirement promotes Lieut.-Col. Albert Hartsuff to the rank of colonel, Major Charles L. Heizmann to be lieutenant-colonel, and Captain and Assistant-Surgeon Edward Everts to be major and surgeon, U. S. A.

PROGRESS OF THE PLAGUE.—According to the *British Medical Journal* of April 21, the mortality from plague subsided considerably in Bombay during the last week of March and gave evidence that with the approach of hot weather the health statistics are slowly approaching normal. In Calcutta, the death-rate has run up with appalling rapidity, being, from March 22 to 28, respectively, 112, 156, 116, 148, 138, 119, and 129. The well-to-do natives are still leaving the city in large numbers, so that trade is greatly disturbed and "the markets are dead." The plague, however, is confined for the most part to two wards and fresh cases in disinfected houses seem to be extremely rare. But notwithstanding the fact that considerable success has attended the attempts to popularize inoculation for plague in some districts, the disease is still carrying off about 5000 every week in India, and causing unrest and disturbances in important centers because of the preventive measures which have to be adopted. Editorially, *The Lancet* of April 21 tells of a serious riot where the militia had to be called out because the people had set fire to the segregation camp and thrown the bodies of five of the policemen who had opposed them into the flames. During the week ending April 12, there was only one new case on the Island of Mauritius, but Formosa reported eighty-three. In Buenos Ayres there are still a few cases, while Ascuncion has reported none during the last twenty-five days.

NEW YORK.

THE TWENTY-FIFTH annual meeting of the Alumni Association of the Medical Department of the University of Buffalo was held the 27th ult., and the commencement exercises of this institution the same evening.

DR. EVAN BARKER JONES, Brooklyn, has been authorized by the courts to change his name to Barker, in order that he may become heir to $200,000 left him by a great uncle on condition that he would assume his surname and coat of arms.

HOSPITAL MANAGEMENT.

The signing of the Burnett bill, by Governor Roosevelt, means the beginning of important changes in the management of the Manhattan and Long Island state hospitals for the insane. It is generally understood that back of this bill, which has now become a law, has been the influence of the State Commission in Lunacy, and the measure has been urged in the interest of economy, it being alleged that the new plans contemplated by this bill would effect a large saving in the matter of unnecessary salaries. Four medical superintendents are summarily legislated out of office, viz.; Dr. A. E. Macdonald, general superintendent of the Manhattan State Hospital, on Ward's Island; Dr. Oliver M. Dewing, general superintendent of the Long Island State Hospital, at King's Park; Dr. Robert M. Elliott, medical superintendent of the old hospital at Flatbush, and Dr. Herman C. Evarts, medical superintendent of the hospital at King's Park. Under the new law the Manhattan State Hospital will be divided into a female division, a male division and the Central Islip colony. The Long Island State Hospital will be divided into two separate institutions, one at Flatbush, and the other at King's Park.

New York City.

DR. ABRAHAM JACOBI, having reached the age of 70 years, the students of the College of Physicians and Surgeons recently presented him with a silver cup. He intends going to Paris shortly to read a paper on "Infant Feeding," at the International Medical Congress.

DR. H. W. WILEY, chief of the Division of Chemistry, U. S. Department of Agriculture, Washington, D. C., delivered an address on "Food Adulteration and its Relation to Public Health," at the first anniversary of the Hundred Year Club, held the 24th ult.

MEDICINE IN MISSIONS.

The questions of the advisability of training natives in medical lines and where they should be trained received considerable discussion at a recent meeting of the Ecumenical Missionary Conference. Dr. Edward S. Fry, of Edinburgh, expressed the opinion that the native agency for medical missions is as important as any other, and that the best method of training the natives will depend on existing conditions, but in most cases they should receive their instruction in their own country. Dr. A. P. Peck, dean of the medical department of North China College, spoke of the training in mission hospitals. Dr. John C. Berry, Worcester, Mass., from his experience while stationed in Japan, pointed out that trained nurses are almost as important as trained physicians in medical missions, and disapproved of taking natives to Europe or America to study medicine. Dr. Moses C. White, New Haven, Conn., favored training them in America, and pointed out that the impracticability of dissection, etc., in certain countries makes such training all the more necessary.

PHYSICIAN SUES INSURANCE COMPANY.

Dr. Sidney H. Carney, who for many years was in the employ of the New York Life Insurance Company, brought suit against that company some months ago for $168,000, claiming that he had been wrongfully discharged, and that he had an oral contract whereby he was to be a salaried expert for life. This contract was entered into in 1869, the agreement being that after the third year his salary should remain at $6000 until changed by the parties of the contract. He was discharged in 1895, at which time he was drawing a salary of $12,000 a year. By mortuary tables it was estimated that he should live for fourteen years more, and accordingly suit was brought for $168,000. Judge Haight, of the supreme court, dismissed his complaint of breach of contract, and an appeal was taken. The appellate division has just handed down an opinion, sustaining the previous decision. The defendant denied that there was a life contract, and asserted that it was void by the statute of frauds.

STRANGE AFFECTION OF MEMORY.

A young student of law recently forgot who he was, and wandered about the city endeavoring to discover his identity and where he lived. He visited the Astor Library and several hotels in quest of information, and finally walked into a police station, and, in a bright, clear voice, astounded the sergeant at the desk by the query: "Can you tell me who I am?" "Where I am, and to whom do I belong?" The sergeant told him he was in New York City, and tried, but in vain, to get the young man to recognize some of the well-known office buildings. Finally, in a sad and somewhat discouraged manner, the young man said: "Could you tell me if there is a young man missing that looks like me?" He was directed to police headquarters, where he repeated this question. A search of the records of those missing showed a description answering that of the inquirer, and accordingly a detective was sent with him to the address given, where his mother and sisters were almost overcome with joy at seeing him again. He did not, however, understand their emotion, and asserted that he did not know them nor the place. When questioned by his physicians, he wrote answers promptly to inquiries regarding persons with whom he had had business dealings, but any reference seemed to be a signal for his memory to fail him again. At latest account he was slowly recovering from his amnesia.

REPORTING CONTAGIOUS DISEASE.

The Health Department is stirred up over the published assertion of Virgil Prettyman, principal of the Horace Mann High School, that the health authorities have been negligent in reporting cases of contagious disease. He charged that out of 20 cases of measles in his school, only 3 had been reported to him by the Board of Health, and only 2 out of 7 cases of scarlet fever. Dr. F. H. Dillingham, asistant sanitary superintendent for the Borough of Manhattan, promptly set on foot an investigation, but was hampered in his work by the fact that some of the cases dated back to January. However,

according to Mr. Prettyman, at least 8 cases of measles had occurred in the present month, and 6 in March. He said that he would not have made such charges in a circular letter addressed to the city newspapers, had it not been that for the past two years he had been protesting to the Board of Health, without result. By a system of cooperation between the Board of Health and the Board of Education, the public schools daily receive a list of those in each district who are sick with contagious disease, or who have been exposed to contagion, and who, therefore, are to be excluded from school until readmitted by certificate from the former Board. While the private schools, being out of the jurisdiction of the Board of Education, do not receive notices from that source, the inspectors of the Health Department are supposed to notify these schools directly concerning every case of contagious disease coming under their notice.

PENNSYLVANIA.

DR. T. LEIDY RHODES, of Boystown, has been appointed a surgeon in the army and has gone to Manila.

TWO MEN living in Norristown, who were conducting a grocery store, were recently arrested and fined $100 each for selling oleomargarin.

AT CHESTER, on the 23d ult., the J. Lewis Crozer Home for Incurables was formally opened. The home was erected at a cost of $47,000, is three stories high and has 112 rooms, and accommodation for 160 patients. Dr. T. P. Maddox has been appointed chief surgeon.

Philadelphia.

DRS. JACOB AND FREDERICK DACOSTA will spend the summer months at Villanova.

BY THE will of Lambert Ware $60,000 will eventually revert to the Germantown Hospital and Dispensary.

A BOARD composed of women has been organized by friends of the St. Joseph's Hospital, to aid in the work of that institution.

ESTABLISHMENT of a systematic instruction of physical culture in the public schools is being considered.

BY THE will of Rebecca Emslie, $1000 has been given the Pennsylvania Hospital, and $5000 to the Episcopal Hospital.

DR. W. T. COUNCILMAN, of Boston, delivered an address at the last meeting of the John Ashhurst, Jr., Society, on the "Pathology of Diphtheria."

AT THE last meeting of the Medicolegal Society, Dr. J. Madison Taylor gave an address on "Hypnotism and Some of its Medicolegal Aspects."

THE LATE Dr. Amy S. Barton left her medical and surgical instruments to the physicians who attended her during her last illness.

AT THE recent annual converazione of the College of Physicians, an interesting exhibit was made of microscopic specimens, and a demonstration given on photographing in colors.

A CIRCULAR has been issued by the Journeymen Plumbers' Association, to be sent to physicians, life insurance companies, etc., for the purpose of securing improved sanitary arrangements in the residences of Philadelphia. It is believed that insanitary ones have caused the spread of contagion, especially diphtheria.

A RESOLUTION was passed at the last meeting of the Philadelphia County Medical Society, in favor of giving graduates of literary colleges, who enter medical colleges, credit for the elementary work already done, and that they be admitted to advanced standing.

MORTALITY STATISTICS.

The number of deaths occurring in the city during the week just closed was 618, a decrease of 121 from that of last week and an increase of 117 over the corresponding period last year. The principal causes of death were: apoplexy, 12; cancer, 10; tuberculosis, 54; influenza, 19; measles, 31; pneumonia, 129.

ACT OF A DEMENTED PATIENT.

A physician recently had a most unfortunate experience with a demented patient who had called at his office. Some time ago he had treated a woman for an ear affection, and after a considerable period she again called at the office and, on being greeted with the words: "What can I do for you, madam?" she said, "I'll show you what I'll do for you," whipped out a pistol and began firing at the doctor. After five shots she walked into the street, and was arrested. It is believed that she is demented. On being questioned, she said she had been prompted by Divine Providence.

MARYLAND.

DRS. CHARLES MATTFELDT and J. C. Schofield have been appointed sanitary officers of Baltimore County.

Baltimore.

AT THE commencement exercises of the University of Maryland, May 1, sixty-five received the degree of M.D.

DR. CLAUDE VAN BIBBEN has been appointed vaccin physician.

DR. F. J. KIRBY, superintendent of St. Joseph's Hospital, sailed on the 28th ult. for Europe, where he will remain till autumn.

DR. JOHN S. BILLINGS, New York City, delivered three lectures on "The History of Medicine," at the Johns Hopkins Hospital, recently.

TWO CASES of smallpox, from a hospital in the northeast section of the city, were moved to the quarantine hospital on the 27th ult. This makes 12 cases, and another suspicious one is under surveillance.

DR. OTTO GUSTAF RAMSAY, instructor in gynecology, Johns Hopkins, has been elected associate professor of gynecology in Yale, and it is said that he will accept.

FOR THE week ending April 28, the death-rate was: whites, 19.31, colored, 33.33 per 1000. Pneumonia caused 25, consumption 28, la grippe 4, and typhoid fever 3 deaths.

THE TWENTY-EIGHTH annual commencement of the College of Physicians and Surgeons was held on April 24. The Alumni Association had its annual meeting, with music and "a smoker," the evening of the 23d. Dr. W. F. Smith was elected president.

THE LIBRARY of the Maryland Medical and Chirurgical Faculty now contains 13,000 volumes, 803 being added during the year; 138 journals are taken. There were 3908 readers during the year, and the expenses were $984.60.

ILLINOIS.

Chicago.

THE STAFF of the Maurice Porter Children's Hospital has been increased by a large number of recent appointments.

THE COMPETITIVE examinations for interneships at the Presbyterian Hospital will be held May 10.

HOSPITAL APPOINTMENTS.

As a result of the recent examination for interneships in the Cook County Hospital, the following have received appointments: Drs. Loeb, Sears, Jakobowski, Kerr, Friedman, Failon, Wendstrand, Hultgen, Tyndale, Cubbins, McNeil, and Riebel. The appointees for the first, fifth and ninth places were from Rush Medical College, those for the second, third and fifth places were members of the College of Physicians and Surgeons, and the other six were from the Northwestern University Medical School. The period of interneship is eighteen months.

NEW JERSEY.

AT THE hospital fair held at Paterson, April 22, $7000 was raised.

DR. A. ARLING HEAD, of Mulford, has been appointed physician of Holland and Alexandria townships.

PROF. JOHN J. MULVANEY, president of the Jersey City Board of Education, in his recent report recommends that a corps of physicians be appointed to look after the health of school children.

DISTRICT OF COLUMBIA.

THE HOUSE committee on interstate and foreign commerce has authorized a favorable report on House bill 9677, known as the Brocius pure food bill.

THE REPORT of the health officer for the past week shows the total number of deaths to have been 137, 81 of white and 56 of colored persons. At the close of the week there were 64 cases of diphtheria, 68 of scarlet fever, and 7 of smallpox under treatment.

OHIO.

THE GRADUATING class of the Toledo Medical College numbered 18, the commencement exercises being held the 26th ult.

THE ANNUAL meeting of the Alumni Association of the Ohio Medical University, Columbus, was held April 24. Dr. C. S. Means was elected president for the ensuing year. The commencement exercises of this school were the same date.

DR. ERNEST SCOTT has been appointed to succeed Dr. H. S. Cozad, at the state hospital, Columbus. Dr. Cozad has gone to Europe for a year of special study.

MICHIGAN.

THE GRADUATING exercises of the Michigan College of Medicine and Surgery, Detroit, were held the 24th ult. There were 25 degrees conferred.

THE APPLICATION of "Dr." Richard Metcalfe of Benton Harbor, for a mandamus to compel the new State Medical Board to register him under the law of 1899, has been denied by the supreme court. This rules out all graduates of medical schools which issued diplomas without requiring attendance.

TENNESSEE.

THE ALUMNI association of the Chattanooga Medical College held a meeting April 24. The graduating class, at the commencement exercises of this institution, numbered fifty-nine. Dr. G. M. Ellis delivered the faculty address.

COLORADO.

AT THE commencement exercises of Gross Medical College, Denver, held April 26, the degree of M.D. was conferred on 22 persons.

IOWA.

THE COMMENCEMENT exercises of the Keokuk Medical College and College of Physicians and Surgeons were held recently. Diplomas were awarded to 42 students.

KANSAS.

A NEW HOSPITAL, costing $60,000, is to be erected at Fort Leavenworth.

Topeka.

THERE WERE six cases of smallpox in the Topeka pest-house on April 23, with five due to arrive the next day.

DR. L. H. MCKINNEY has filed a claim of $150 with the city council for damages alleged as a result of the improper fumigation of a residence by the city health officers. He moved into the house after it had been fumigated, and his whole family contracted smallpox soon after.

GOVERNOR STANLEY, in outlining his future policy, has said that the State Board of Health is an unnecessary adjunct of the state, and that the work now done by the Board, consisting of fifteen members, could be done just as well by the secretary alone, who should have all the authority and power now conferred on the Board.

CALIFORNIA.

Alameda.

The Board of Education has adopted a rule forbidding the employment, as teachers in the public schools, of any persons afflicted with tuberculosis.

San Francisco.

THE CITY'S Board of Health has acted favorably on the recommendation of the Los Angeles Board and will do all in its power to secure the necessary legislation for deportation of all lepers who may be found in this country.

A NEW PLAGUE CASE.

(Special Telegraph to THE JOURNAL, *May 1.)*

Another case of plague has been found in San Francisco, in a Chinaman whose body was found April 25 in the Chinese quarter, with a large bubo in the left side, near Poupart's ligament, and with the other inguinal glands swollen. The news was successfully kept from the press by the Board of Health, and smear preparations made. These disclosed the bacillus pestis. Two guinea-pigs were inoculated from gland tissue and one died fifty-eight and the other sixty-one hours after. Both pigs presented the characteristic lesions of the plague. Extraneous organisms seen in the glands were also present, but in small numbers, while the plague bacillus was present in enormous numbers. The identity of the latter has also been demonstrated by culture methods, by Drs. Ophuls, Montgomery and Kinyoun, all agreeing in the diagnosis made. The Chinaman has lived in San Francisco thirty years and was 56 years of age. No clinical history could be obtained.

AUSTRALIA.

IN VICTORIA the crusade against rats has extended even to the remote country districts, and a sanatorium for plague patients, to be erected by the government, is proposed.

THE GOVERNMENT has decided to establish depots at all the centers of Auckland for the free distribution of phosphorus and other poisons used in exterminating the rats.

SYDNEY'S PLAGUE.

The plague cases up to the date of this letter (March 19) number twenty-three, with eight deaths. The first case was reported in January. Up to March 17, more than one thousand persons had been inoculated with Haffkine's prophylactic serum, most of these being engaged in waterside occupations. A few hours following the inoculation slight headache and feverishness have been noted, but no illnes of any note followed injection. Dr. Ashburton Thompson says that as the plague has gained a foothold in the colony it will not be entirely eradicated for many years. He does not mean that the epidemic will be continually maintained at a high average of cases, but that it will recur at certain seasons. The average duration of each visitation will probably be about eight months. He says that the absolute annihilation of all rats would be followed by entire removal of all infection, but as it is not possible to rid the land of the rodents the disease must remain. The department of health is planning the production of the remedial serum in the colony, but it will be some months before the first results can be obtained. The proposition to erect a special plague hospital for the metropolitan districts has been given up for the present. The dirt and refuse of the city is collected by the city and carried daily, by punt, as far out to sea as the weather will permit, and the government has agreed to bear a large share of the cost of cleaning the city. The opinion of Dr. Thompson is that the only reparation that can be made for long neglect is the obliteration of all existing wharf structures and the erection of solid wharf frontages which will be not only impervious to water but proof against invasion by rats. The campaign against rats was begun late in February. All of the men engaged in the work of extermination being first required to subject themselves to inoculation with prophylactic serum. Posters were also placed in the portions of the city most likely to be invaded by the disease, and a house-to-house distribution of hand-bills carried out.

HAWAIIAN ISLANDS.

THE HILO Board of Health has been considering quarantine against Honolulu goods, in spite of the fact that Honolulu's plague is practically a thing of the past.

ACTION HAS been taken by the minister of foreign affairs which places Sydney, N. S. W., from now on in much the same quarantine relations relative to the Hawaiian Islands as exists between Honolulu and the mainland ports.

PROPOSED HOSPITAL FOR JAPANESE.

A plea has been made to the public for donations for the purpose of building a hospital for Japanese subjects on the Islands. The proposed cost of the institution is $6500. Early last year the Japanese Benevolent Society considered building a permanent charity hospital, but the matter was given up and a private one erected by a Japanese physician, this being closed at the time of the plague epidemic.

LOSSES FROM THE PLAGUE.

The Council of State recently passed a resolution to the effect that the Hawaiian Government should pay all just claims for losses caused by the action taken by the Board of Health in connection with the suppression of the plague, i. e., those caused by the burning of houses, furniture and goods by direct order of the Board, as well as losses caused by the acci-

dental spread of the fire, and those caused by the fencing up of land on which houses have been burned. The Council also advised the appointment of a new Court of Claims (see last week's JOURNAL, p. 1081) to consist of five members, three of whom shall be business men.

HONOLULU'S PLAGUE.

Up to the date of this communication, April 19, there have been no cases of bubonic plague since March 31, and with no cases to May 1, on that date the quarantine by the local board of health will be raised. The plague, which first appeared about four months ago, may therefore be said to have been practically stamped out, there having been only one death per week therefrom during the past six weeks and none during the past twelve days, while the deaths from consumption and pneumonia have averaged fifteen or twenty a month. The cases to date number 71, with 62 deaths. Of these, 17 were cared for in the pest-house, with 9 recoveries. The shipping business of the port has been seriously interfered with by the epidemic, and no communication is yet permitted with the sections of the city in which the deaths occurred. The buildings occupied by Asiatics and others as dwellings and shops, burned on account of the plague raging there, numbered about fifty. Fortunately the sugar plantations are from ten to seventy miles from the city, and no communication has been allowed with them except by telephone. They have therefore remained strictly free from contact with the disease, and the sugar has been shipped direct from the mills to the vessels, the latter not being allowed to go within certain limits. Examinations from the soil, etc., reveal bacteria present, but none of bubonic plague. Other examinations of foodstuffs preserved in acidulated liquids show them to be free from bacilli. Too much credit can not be given Dr. Wood, of the Board of Health, for the work done in stamping out the disease.

CANADA.

SMALLPOX IN WINNIPEG.

Smallpox of a very virulent character has broken out in the General Hospital, Winnipeg. Five cases have so far developed, but it is impossible as yet to foretell the extent of the exposure. The man who brought the disease to Winnipeg was taken to the hospital in a hack and, after his death, the body was handled by the undertakers, who did not know the nature of the death. Subsequently his effects were handled by several people in and about the hospital, and the first thing the medical health officer of the city, Dr. Inglis, knew, he had five cases of smallpox to deal with of a very malignant type. These have been removed to the quarantine station, and this as well as the hospital is now being guarded by special constables. Vigilance will be the motto of the authorities for the next few weeks.

AMALGAMATION OF TORONTO AND TRINITY.

The controversy between these two rival institutions has assumed a new phase. In the April issue of the *Canada Lancet*, a journal markedly in touch with Trinity Medical College, the editor and one of the associate editors come out squarely for the amalgamation of the two schools. Their cue has no doubt been taken from an interview appearing in the daily press, accorded by Dr. Adam H. Wright, professor of obstetrics at Toronto University, who has placed himself on record as being in favor of closer relations between Toronto and Trinity. Then there is the fact also that Trinity University is about to seek federation with Toronto University—the provincial university, and when such federation is accomplished, and Trinity University relinquishes her degree-conferring power, Trinity Medical College will have to look elsewhere for her M.D. degrees. The editorial in the *Lancet* does not deny that Trinity's cause is a righteous one; but expresses the opinion or rather belief that the amalgamation of the two institutions would be "the best solution of the existing difficulty," that it would do away with jealousies stated to exist between practitioners who are connected with these institutions, which also is at times evidenced in the societies as well as in general practice, and further, that medical education would be placed on a more permanent and lasting basis than it is at present in Ontario. Another reason advanced for the proposal of amalgamation is that this city could then proceed to do post-graduate work; that the men who now go abroad would be accorded advantages at their doors which would induce them to stay at home. There is no doubt that the present time is an important one in the history of medical education in this province; and as the legislature has prorogued without taking up the McKay bill again, the intermission will probably see the discussion of the whole question in all its bearings, and the outcome will be awaited with considerable interest, not unmixed with some anxiety for the proper adjustment of the whole question.

PECULIAR HOSPITAL METHODS.

A private hospital, said to be located in the State of Michigan, whose commercial instincts have no limitation so far as distance in "miles" is concerned, has been endeavoring within the past week or two to entrap some Toronto physicians, ostensibly to secure their appointment on their "staff," but really for the purpose of fattening their own revenues. The plan of campaign was for the surgeon or physician here to act as agent for the concern in Michigan, to whom patients were to be suggested; these would then be written to and, if secured, the surgeon here was to participate in the profits to the extent of one-half. The following is a copy of a letter sent to a "patient" here:

"Dear Sir or Madam: We beg respectfully to call your personal attention to the fact that we have just recently elected and appointed Dr. ——of your place to be a visiting and consulting physician and surgeon on the medical staff of our hospital, on acount of his excellent medical qualifications and professional standing. We have no hesitation in recommending him to you, and should you, any member of your family, friends or acquaintances become sick and desire medical treatment, we wish to highly endorse the Doctor and recommend you to patronize him. Should you at any time desire the services of our hospital for yourself, friends or acquaintances, the Doctor will make arrangements with you so that you can come here for treatment. We have a first-class up-to-date surgical hospital, with every home comfort and a medical staff of eminent physicians and surgeons, and our charges are less than anywhere else you may go. Trusting you will bear these facts in mind, believe us to remain."

A further additional inducement to the Doctor to seek appointment on this "wonderful" institution was the presentation of a lithographed certificate of membership to the physician himself, 17x22 inches, rated in price according to the quality of paper and the beauty and design of the scroll, at $5, $7.50, or $10. The income from this source was to go into funds which "are devoted to the maintenance of the hospital for the benefit of us all." We do not think that this "up-to-date" institution has been able to land any "suckers" in Toronto.

Montreal.

DR. JAMES BARCLAY, lecturer and demonstrator in obstetrics at McGill University, has entered on his duties there.

TWO CASES of smallpox have appeared within the past week. The first arrived from Rossland, B. C.

DR. A. LAPTHORN SMITH has retired from the Montreal Dispensary, after a service of twenty years. He will continue as surgeon-in-chief of the Samaritan Hospital, surgeon of the Western Hospital, consulting gynecologist of the Women's Hospital, and professor of clinical gynecology at Bishop's College.

A LITTLE NONSENSE NOW AND THEN, ETC.

Generations of graduates of medical McGill, scattered over Canada and the United States, have not forgotten the boys' factotum, Mr. James Cook, or "Cookie," as he is affectionately called by those whose letters, caps and telephone messages he looks after. It is now an annual affair amongst the medicos of McGill, just prior to taking their departure for the summer holidays, to make a presentation to Mr. Cook, in the way of coin and an elaborate illuminated address, in which superabundant flattery and adulation predominate. This year "Cookie" was presented with $30 in five-cent pieces, all snugly stowed away in a big box of ashes, supplemented with an address, which was headed as follows: To Sir James Rip Van

Winkle Cook, Knight Commander of the Vats, First Lord of the Treasury, President of the Ancient and Illustrious Order of Prevaricators, Lord Warden of the Vault, and Premier of the Dominion of Aesculapius. Mr. Cook, who was dressed in a grand military outfit for the occasion, responded at considerable length in a poem. Afterward a procession was formed and the devoted attendant was shouldered up and down and around the College grounds.

Correspondence.

Medicine in the Far East.

March 30, 1900.

A CEYLON HOSPITAL.

To the Editor: During my stay at Colombo, on the Island of Ceylon, I frequently visited the civil hospital of that place and saw considerable of the medical work done there. This institution has accommodations for 350 patients. The buildings are situated in a beautifully shaded grove of cocoanut palms, and are disconnected pavilions, flanked on each side by open verandas, on to which large windows, for their perfect ventilation, open. There is a medical school connected with this hospital, where seventy-five young men are being educated. The faculty is composed of English, Dutch half-breed and pure Ceylonese natives, and represent all shades of complexion, from the fair-skinned Anglo-Saxon to the Singalese as black as the Congo negro. The color line seems not to disturb the harmony of this mixed body of teachers in the least, but the Dutchman's hatred of the Englishman, since the outbreak of the South African war, I saw manifested on more than one occasion. The students, however, were all dark-skinned natives of the island, and on the whole impressed me as a set of men superior to those I met studying medicine in India.

Before beginning their studies, these men have to pass a preliminary examination that is equivalent to that required to enter the freshman class at Oxford. They have a five years' graded course, and after completing this many of them go to London or Edinburgh to pursue advanced studies.

NO BERI-BERI IN CEYLON.

It is a strange fact that, while the climate here in Colombo is so like that of southern China, I never saw a single case of beri-beri on the island of Ceylon.

ANCHYLOSTOMIASIS.

I saw in the above mentioned hospital my first case of anchylostomiasis, a parasitic disease affecting the intestinal tract, especially the duodenum. The patients all had an aspect as if far gone with Bright's disease, added to which there was a decided jaundice appearance to the skin. The drinking of dirty water from marshes and stagnant pools is the source from which the disease originates. The treatment consists of the internal administration of thymol and iron. The mortality is from 40 to 60 per cent.

TETANUS IN CEYLON.

During my fequent visits to this hospital, I never failed to find a case of tetanus in its wards. A large percentage of these unfortunate patients were hostlers. Dr. Thomas, one of the surgeons, told me that they had found the soil about the horse barns, in Colombo, full of tetanus germs, and that when a man who attends horses gets an abrasion of the skin on any part of his body infection often follows. They treat from 25 to 50 cases of this disease annually, in this institution, which I believe is a larger number than is treated in any hospital of its size in the world. Patients of the acute class all die, while a few of those in whom the disease assumes a mild form at the outset and runs a chronic course, recover. They treat it here with the bromid of potassium, cannabis Indica and opium. It is, however, on the latter remedy that they place main reliance, and they give it to an extent that keeps the patient in a condition of deep narcosis.

NO DIPHTHERIA NOR SCARLET FEVER IN CEYLON.

Professor Sinnetawby tells me that he does not believe that there has ever been a case of either diphtheria or scarlatina on the Island of Ceylon. Here in the Far East I find that where one of these diseases is absent the other never prevails, which would seem to be an argument in favor of their common origin.

DIABETES MELLITUS.

I saw here a large number of cases of diabetes mellitus. The physicians tell me that in some sections of the island among certain classes of the population, one-half of the inhabitants suffer from glycosuria. Even the small land-holders in Ceylon lead a life of perfect idleness. If the proprietor owns a cocoanut grove of only four or five acres, and a rice field of the same size, he can live the kind of a life that he does without ever doing a single stroke of manual labor. His dwelling is an unfurnished, mud hut, to which he resorts only when it rains. He spends his days basking in the shade of a tropical grove, and hires, for a pittance, a coolie who runs at his bidding and attends to his every want. This man's diet is composed largely of rice, and to this class belong those who suffer so often from diabetes mellitus. On the contrary, the coolie, who serves this land-holder, and the jinriksha man, who plays the rôle of a horse, under the hot rays of a tropical sun, though they may both live on the same diet as the man who pursues a sendentary course in life, scarcely ever have this disease. The physicians in the hospital tell me that if early in the course of the complaint you can induce the sufferer to take an abundance of active exercise, you can in this way often arrest the disease. They treat the patient by eliminating rice and bread from his diet, but allowing the free use of meat, beans and vegetables that contain little or no starchy elements. As for medication, they rely entirely on nitric acid and opium.

INTESTINAL DISEASES.

Bowel complaints, consisting of diarrheas, dysenteries and the like, I found here as everywhere in the Far East, extremely prevalent. Dysenteric troubles often assume a chronic form and, despite all manner of treatment, run on unchecked for months or years. Here they treat the acute form of this trouble by first giving a free dose of castor-oil, and follow this by the administration of opium and ipecacuanha. The latter drug they give in large doses, often administering as much as 30 grains twice in the twenty-four hours. They claim that patients thus treated are less liable to hepatic abscesses and other sequelæ than those treated without this remedy. The chronic form of the disease they treat by keeping the patient on a milk diet, freely irrigating the lower bowel with a boric acid solution, and following this by a rectal injection of a rather strong solution of nitrate of silver.

The craze for opening the peritoneal cavity does not yet seem to have invaded the Island of Ceylon. I saw a myomectomy done for the removal of a subserous uterine fibroid as large as my fist. From the sensation produced among the hospital staff by this operation I concluded that operations of this kind were very rare here. In fact, the doctor who did the operation told me that there had never been a complete hysterectomy done on the island. Cases that require expert surgery, in this line, are sent to Madras to be operated on.

MEDICAL TEACHING IN CALCUTTA.

Calcutta is the medical center for all the vast empire of India. There are, however, medical schools at Madras, Bombay and Lahore; but by far the largest and most important of them all is the one located at the capital of British India. The medical class here numbers about 500 students. Before beginning the study of medicine, they have to pass a preliminary examination and the requirements are the same as at Colombo. I attended several clinics here, where I came in contact with these students, and while a few of them seemed bright and intelligent, the majority were a sorry-looking set out of which to attempt to make doctors. Their course of study is a graded one of five years, and as only about fifty are graduated annually their examination must be a quite rigid one. The teaching is all done in English, which I found many of the students with whom I conversed, did not understand perfectly. A professor told me that they were trying hard to cut the class down as they now had more students than they could properly teach. I asked him what fees these men would be able to command when they had finished their studies and began practice in a purely native community. He said that after furnishing their own drugs they would not get more than ten cents a visit on an average. The whole subject of medical education

in the British possessions in India is under one general law, and is therefore uniform. The professors in the medical colleges, as well as the surgeons to the various hospitals, all over the country, are officers in the English service, and receive no pay from the students they teach, or the hospital patients they attend. These men have, however, the right to carry on private practice when that does not interfere with their official duties, and in this way many of them earn large salaries. In India, though medical teaching and the granting of a diploma are under strict legal surveillance, there is no law preventing any one who chooses from practicing medicine. In fact, there are not qualified men enough in all this great empire to attend to the wants of the sick. Besides, associated with the healing of the sick, among the great mass of Indians there is a certain amount of religious ceremony with which, since the last mutiny, the British government seems little inclined to interfere.

CALCUTTA'S MEDICAL COLLEGE HOSPITAL.

To this institution, which contains 300 beds, only natives are admitted, and the sick are freely utilized as material for teaching. Diseases of the skin and gastrointestinal disorders were the prevailing complaints that I saw in the wards. Patients suffering from dysentery and hepatic troubles as sequelæ filled at least one-half of all the beds in this institution. Operations for hepatic abscesses are probably as frequent here in India as those for appendicitis in America. The frequency of this disease very often leads men, I suspect, to a too hasty diagnosis, as well as carelessness in the examination of their patients. I saw a case operated on here for what was diagnosed as a hepatic abscess, but which turned out to be an encapsulated empyema of the right side of the chest. The doctor saw his mistake, which was a pardonable one, but I did not pardon him for trying to make me believe that his first diagnosis had been a correct one.

IMMUNITY OF NATIVES TO TYPHOID.

Croupous pneumonia and acute rheumatism are extremely rare diseases in Calcutta, if they ever prevail at all. I saw illustrated the fact that the native Indian is practically immune from the infection of typhoid fever, for in this native hospital, I am told, there has never been a single case of the disease, while at the civil hospital, where foreigners only are treated, I saw at least a dozen patients suffering from this complaint.

SURGERY AND ENVIRONMENTS.

How a surgeon—as one in this hospital—in these last days of the nineteenth century, can see no impropriety in making his visits to his wards, dressing filthy wounds, opening abscesses and then going directly to his operating-room and performing operations that require the most scrupulous cleanliness is something that I can not comprehend. The doctor apologized to me for some of his loose habits in his asepsis by saying that the men he taught, when they went out to practice on their own account, would not be able to practice perfectly clean surgery, and therefore he thought it best to teach them only such modes as they would be able to copy in after life.

This puts me in mind of an occurrence, that, though it may have nothing to do with medicine in the Far East, I feel inclined to relate: Some time back in the eighties, a professor from Chicago, myself, and a recent graduate from Harvard, were seated at a table in a café in Vienna. The former was a man of great natural ability, and was endowed with an energy that enabled him to surmount every difficulty he met in life. He had a commanding appearance, a huge frame, and a heart to match. He had been appointed professor of obstetrics in a new medical college, and had come on to Vienna to post up on the branch he was to teach. Our young companion took him to task for being a party to the organization of a medical school that was not needed and the requirements of which, for the graduation of its students at that time, were not very high. The professor defended himself by an argument something like this: He said that in the agricultural sections of the Far West the life of the doctor was so rough, and his labors so hard, that men who were highly educated, like our companion, would not occupy these fields. Therefore a class of men must be taken with less education and taught the more practical branches of the profession, and sent out to occupy these territories that would otherwise be occupied by men who had had no medical instruction whatever.

HYDROCELE IN INDIA.

Everywhere in India this is extremely prevalent, and I have seen an operation for its relief in nearly every hospital I have visited in the Far East. Dr. Murphy, of Calcutta, operates by opening up the sac freely, cutting away about one-half of its serous surface, then stitching this to the skin, swabbing the remaining portion of the sac with a concentrated solution of carbolic acid, approximating the edges of the wound by a few disconnected sutures, and then packing the whole wound with iodoform gauze. He claims to never fail of a perfect cure after this mode of operating. I saw him remove an elephantiasis of the scrotum that weighed twenty-five pounds. When I expressed my astonishment at the size of the growth, he assured me that this was a small affair, and that he had lately, successfully, removed one that weighed 100 pounds. The civil hospital in Calcutta is devoted to the care of the sick of all nationalities except the native Indian. I saw more patients suffering from gonorrhea in this institution than I ever saw before in a hospital of its size in my life. The treatment used for the relief of these patients is extremely antiquated, consisting of urethral injections without any relation as to what part of the urethra is involved, and the administration of balsam of copaiba. Of this last remedy Nothnagel says: "While it disgusts the palate, nauseates the stomach, and irritates the kidneys, it has no influence upon the course of the gonorrhea for which it is given."

I saw here a number of cases of typhoid fever, and amid the different shades of complexion of the patients was impressed by the fact that the disease has a most decided preference for the man with a white skin. They treat the cases in this institution by the administration of chlorin water and the regulation of the bowels by the use of copious injections of warm water.

W. S. CALDWELL, M.D.

Medicine as an Art.

PHILADELPHIA, April 9, 1900.

To the Editor: If we take from the medicine of to-day that which is art, we will leave, surely, not more than one-half to the scientists pure and simple—a class that would perhaps be more aptly designated as materialists. When the old-time writers styled their works on physic, "The Art and Science of Medicine," they gave unmistakable evidence of their appreciation of this quality in medicine. With them healing was more than a science to be learned from books. Indeed, it comprehended so much more that was not to be found anywhere in books that great minds in medicine were earnestly sought after as preceptors. The relations between master and pupil were very like those that bound together master and pupil in all the other realms of art. With the passing of the preceptor there has gone out from among us a something that our present-day system seems not yet to have made good. Have we gained or lost? Who shall say?

Every art contains within itself known or unknown elements of one or more sciences. Drawing rests on the laws of perspective; painting on the laws of color harmony and contrast; sculpture on the science of anatomy; music on the laws of sound harmony and contrast; photography on the laws of optics and chemistry; and so on. Even good literature—as Herbert Spencer has shown—must conform in greater or lesser degree to the philosophy (i. e., laws) of style. There seems an indissoluble relation. Medicine has by some been placed among the useful rather than the fine arts; and yet healing has to do with nothing less than living and the life principle itself. Professor Griggs has said that of all the fine arts the art of living is the finest. Viewed from this standpoint healing rises above the level of the purely useful arts. Too, medicine is no mean art in its embrace of the major and minor sciences, most of which pay daily tribute to the thinking men of our guild. Other things being equal, the fullest measure of professional success is most likely to attend him who brings the various 'ologies to wait upon Nature in her allwise healing. At some point in almost every severe illness Nature craves a mo-

mentary lift from some one of the sciences, ready then to work out alone her hidden processes; and so unconscious has become our impressment of these aids into the healing art that we take little thought of it. Thus it appears that all art is, at bottom, science—that is to say, has its nucleus of classified facts or knowledge. But he who would attain to the art must first grasp well the science, and then resublime it with his own personality. Then, and then only, does it become art. It would be difficult to say just what the materialist lacks as he essays a canvas, a bust, a bas-relief, a sonata, a sonnet. It would be unfair to say that he is wanting in color sense or perspective in the fundaments of modeling, of the laws of harmony or of the construction of verse. Without these he is nothing. They are the cardinals of his work. What he does seem to lack is the Divine spark that, fusing all these needed things, rises above them and imprisons Nature's secrets, even the most elusive. With some—indeed, with many—this height will be attained only by the fiercest, the most intensive industry. But the man is none the less an artist, neither a genius because of that fact.

Equally difficult is it to criticise the medical man who brings nothing but pure science to his patient's bedside. He certainly does not lack book or laboratory knowledge of physics, chemistry, bacteriology, biology, physiology or pathology; neither is the work of his brethren in foreign fields unknown to him. These are the very tenets of his faith. Of things material he is easily master. But that is only half the proposition. This materialism reveals itself in the tendency to look on patients as so much flesh and blood; to treat the outer casement rather than the individual within; to forget that "we are such stuff as dreams are made of"; to take little thought of hereditary impress, prenatal influence, temperament, domestic and commercial status and a host of other nonmaterial factors. Any or all of these may produce all manner of perversions of nerve function. The insufficiency of such methods has been shown by none more clearly than by Weir Mitchell. Mind and matter sustain a practically complete relation to each other in the healthy human body, and the correlative of this quality in the body is the dual nature of medicine.

So, if the ultrascientist would realize the full measure of his possibilities, he must possess more or less intuition. He must have a genius for affinity—what Goethe called *Weltverwandtschaft* and Griggs "humanism". It is really a species of telepathy. Discreetly used, it is the best and safest short-cut into the patient's confidence, without which we are powerless in most cases. This faculty of insight—of seeing the unseen—is what distinguishes the *artist* physician from the materialist. It removes him infinitely from the monger of patients who plies his profession for revenue only. It is difficult to believe there are many of these inside the guild. Moreover, if such there be, they are "punished, not *for* their sins, but *by* them." Innate, instinctive appreciation of the myriad outworkings of human nature makes of the clinical worker at the bedside, the artist physician. Of the well-rounded man of science it makes a mental giant, a savant—the very flower of our cult.

It should be the aim of the body medical of to-day to cultivate this spirit of affinity in every way, and to multiply its present great usefulness by evolving its members into the artist physician with wide-angled mental vision. This is the man who, while ministering to the physical sufferings of his patient, will never lose sight of the psychic element—which is no small matter in this day of exceeding heteropathy (mental healers, "osteo" quacks and fortune-tellers included!).

We to-day hear much of the *science* of medicine. It is not amiss to reiterate that, classify our knowledge as we will, there remains an outlying, an unaccountable factor in successful healing, the presence or absence of which marks the true physician from the medicine giver pure and simple. This is the *art* factor. The true physician is no less a genius in striving for perfection in healing than is the painter, the sculptor, the orator, the musician, the literateur, in trying to attain their highest ideals. The passion for perfection is the hall-mark of the true artist in medicine as in all things pertaining to the higher life. All art is one, and not least among its votaries are the priests of Hygeia.

WENDELL REBER, M.D.

The Journal's Advertising Policy.

TOLEDO, OHIO, April 17, 1900.

To the Editor: When THE JOURNAL'S recently announced policy concerning advertising is in full force, the enjoyment I have heretofore gotten out of its perusal will be heightened, because there will be lopped off from it the only disquieting feature which has ever manifested itself. I have always had an antipathy for unethical medical advertisements, possibly from pharisaical inclinations, but then, the antipathy exists nevertheless.

My thoughts on the subject of medical advertising have been the same for so long that grooves have been worn so deeply in my gray matter that now I can not change my views. I am in fact a crank on that subject. In consequence of this life-long habit, whenever I come across a quack advertisement in a religious newspaper, or in any paper which claims to be respectable, I make a note of it, and when I have spare time I write to the one who is responsible for its appearance. I have written to judges, reverends, D.D.S.'s, mayors, in fact, to all sorts of people, who have given testimonials, and to editors and publishers of all kinds of periodicals. I have had more enjoyment and entertainment than would pay me for the trouble of writing the letters, out of nearly all of my correspondence. The exceptions have been when some publisher told me that he was advertising the same secret preparations to his subscribers that the best medical journals were advertising to physicians, and that their readers know as much regarding the composition of the medicines as do the physicians. Not all of them would see that point, but whenever I have received a letter like that, I have written my next rainy day letter to some one else; because, while I like argument, and have never been known to stop arguing as long as the other man would talk, still, when I can get out of so doing, I never go up against a stone wall. The carrying out of THE JOURNAL'S policy will remove what has been to me a thorn in the flesh.

I tell the publishers of religious newspapers that if they would get out and hustle for business the same as other men do, they could get advertisements and not be obliged to sell their columns to quacks. I know that many physicians differ with me, but I can see no harm in publishing in THE JOURNAL *advertisements of every good thing which people buy.*

It is our business to oppose everything of a medical character which is not in accord with the best teaching of scientific medicine. That we may do so successfully and consistently, THE JOURNAL must not only be as clean as the best, but absolutely above reproach. It ought not to be a question with us whether THE JOURNAL is a financial success, so much as whether it represents only the principles of scientific medicine. We surely should never think of blaming the Trustees or the Editor if THE JOURNAL met with a financial loss on account of the rejection of bad and questionable advertisements. Scores of times publishers of religious and other papers have sought to justify the appearance of quack advertisements in their columns, by telling the money value of those they had rejected. THE JOURNAL should be, and is, governed by a higher standard. Success to it!

JAMES L. TRACY, M.D.

Deaths and Obituaries.

GEO. E. FROTHINGHAM, M.D., Detroit, Mich., died April 24, aged 64 years. He was born in Boston, in 1836. He attended St. Phillip's Academy, in Andover, Mass., then went to Ann Arbor, Mich., where he was graduated from the medical department of the University of Michigan, in 1864, and in 1867 was made demonstrator of anatomy there. In 1870 the chair of ophthalmology was created, and he was appointed to fill it. In 1889 he resigned and went to Detroit.

WILLIAM F. ROBINSON, M.D., editor of the *Hatborough Free Spirit*, died in Philadelphia, April 15, aged 63 years. He was born in Boston, and was a graduate of the medical department of the University of Pennsylvania, and practiced for ten years in Hatborough, where, in 1873, he established the journal which he edited until his death. He was for six years a

state quarantine physician, and for eight years connected with the health bureau. During the Civil War he served four years as surgeon of the 104th Regiment of Pennsylvania Volunteer Infantry.

J. N. O'BRIEN, M.D., Milwaukee, Wis., died April 22, aged 62 years. He was a native of Pennsylvania, and received his early education there, in the state university; he also studied at the University of Notre Dame, after which he was graduated from Rush Medical College, Chicago. He was a member of the AMERICAN MEDICAL ASSOCIATION and of the Wisconsin State Medical Association.

WILLIAM G. COOPER, M.D., died at the Toledo State Hospital, Toledo, Ohio, April 19, aged 34 years. He was graduated from Findlay College in 1891, and from the Baltimore (Md.) Medical College in 1895. He had been assistant physician in the hospital for five years, and resigned April 1, with the intention of beginning the practice of medicine in Findlay.

HARVEY C. JOHNS, M.D., Jefferson Medical College, Philadelphia, died at his home in Decatur, Ill., April 22, aged 81 years. He was surgeon of the 129th Illinois Volunteer Infantry.

ERASMUS DARWIN HILLIS, M.D., died at his home in Montour Falls, N. Y., April 19, aged 61 years. He was a captain of the 189th Regiment, New York volunteers.

J. C. MORGAN, M.D., died at Sioux Falls, S. D., April 19, of pneumonia. He was a veteran of the Civil War and had been prominent in state medical circles.

EDWIN O. BAKER, M.D., Spokane, Wash., died April 18, aged 70 years. He formerly practiced medicine at Lake City, Minn., and Menomonee, Wis.

RIPLEY CLARK, M.D., Windsor, Vt., died April 23, aged 83 years. He had been medical director at the state prison for twenty years.

CONRAD SPENS, M.D., born in Stockholm, Sweden, in 1844, died in Joliet, Ill., April 27.

S. G. TUTT, M.D., died April 25, in Kirkwood, Mo., of bronchial pneumonia, aged 81 years.

S. S. PITTMAN, M.D., Chipley, Ga., died April 21. He was 41 years old.

A. M. BEACH, M.D., Niles, Ohio, died April 20, of pneumonia, aged 52 years.

P. C. WOOTEN, M.D., died at Lafayette, Ky., April 23, of la grippe. He was 75 years old.

W. P. SMITH, M.D., Salina, Kan., died April 23, after a lingering illness.

A. M. DENT, M.D., Coshocton, Ohio, died April 5. He was graduated from the Columbus Medical College in 1882.

W. G. COOPER M.D., formerly assistant superintendent, Toledo State Hospital, died at his home in Van Buren, Ohio, April 20.

FRANK F. MYERS, M.D., University of Pennsylvania, 1890, died in Allegheny, Pa., March 29, aged 33.

DEATHS ABROAD.

O. LEICHTENSTERN, M.D., Cologne, Germany, an indefatigable scientific investigator and writer on internal medicine died recently.

JOSEPH GRUBER, M.D., died recently at his home in Vienna. He was a recognized authority on laryngology and otology.

Association News.

Annual Announcement.

The fifty-first annual session (53d year) of the AMERICAN MEDICAL ASSOCIATION will be held in Atlantic City, N. J., on Tuesday, Wednesday, Thursday and Friday, June 5, 6, 7 and 8, commencing on Tuesday at 11 a. m.

REGARDING REPRESENTATION.

The delegates shall receive their appointment from permanently organized state medical societies, and such county and district medical societies *as are recognized by their respective state societies*, and from the medical departments of the Army and Navy and the Marine-Hospital Service of the United States.

Each state, county and district medical society entitled to representation shall have the privilege of sending to the ASSOCIATION one delegate for every ten of its regular resident members, and one for every additional fraction of more than half that number; *Provided*, however, that the number of delegates from any particular state, territory, county, city or town shall not exceed the ratio of one in ten of the resident physicians who are entitled to membership.

PERMANENT MEMBERS.

The permanent members shall consist of all those who have served in the capacity of delegates, and of such other members as may receive the appointment by unanimous vote, and shall continue such so long as they remain in good standing in the body from which they were sent as delegates, and comply with the requirements of the By-Laws of the ASSOCIATION, so long as they shall continue to conform to its regulations, but without the right of voting; and, when not in attendance, they shall be authorized to grant letters of introduction to reputable practitioners of medicine residing in their vicinity, who may wish to participate in the business of the meeting, as provided for members by invitation.

MEMBERS BY APPLICATION.

Members by application shall consist of such members of the state, county and district medical societies entitled to representation in this ASSOCIATION as shall make application in writing to the Treasurer, and accompanying said application with a certificate of good standing, signed by the president and secretary of the society of which they are members, and the amount of the annual subscription fee, $5. They shall have their names upon the roll, and have all the rights and privileges accorded to permanent members, and shall retain their membership upon the same terms.

A distinctive badge will be provided for delegates.

Secretaries of societies are requested to forward names of delegates as soon as possible, as a list of these will be prepared before the meeting.

GEORGE H. SIMMONS, M.D., Secretary.
61 Market Street, Chicago.

Railroad Rates for Atlantic City Meeting.—As announced in these columns last week, the Trunk Lines Association has granted one and one-third fare rate on the certificate plan for the Atlantic City meeting. Tickets will be on sale in the territory of this Association from May 30 to June 7, and good to return to June 23. Action has also been taken by the Central Passenger Association, and the same rate announced from all points in the territory of the latter Association, tickets also to be sold on the certificate plan, the dates of sale and the return limit being the same as above. The certificates will be signed at Atlantic City by Dr. W. Blair Stewart, N. E. Cor. Pacific and North Carolina Avenues, and a special agent will be present on June 6, 7 and 8. Up to date no advices have been received from other passenger associations. The territory covered by the two first named includes practically everything north of the Ohio River and east of the Mississippi from Cairo to St. Louis, thence east of a line drawn from St. Louis to Chicago, through Jacksonville, Decatur, Gibson, etc.

Section Headquarters at Atlantic City.—Following is a correct list of the hotels selected as headquarters for the different Sections. These hotels, with two exceptions, are all located on the board walk, directly fronting the ocean, and are considered the best hotels. Every effort will be made by the proprietors and their managers to furnish proper and pleasant accommodations to all who elect to stop with them. Each Section has been located separately, with a view of avoiding the crowding and general annoyance that has characterized a number of the previous meetings. The hotels are all well located and are comparatively near the place of registration and the general meetings in the assembly hall, as well as the meeting places of the different Sections, hence no member need hesitate to arrange his accommodations at the one selected as the headquarters for his Section. The names and addresses of the presidents and secretaries of the different Sections have been placed in the hands of the managers of the respective hotels.

and the latter have been requested to correspond with the former, asking for a list of the Sections' membership, that they may address each member and ascertain early about how many will be in attendance, and acquaint themselves as near as possible with the desired accommodation expected by each individual. Every member of the AMERICAN MEDICAL ASSOCIATION and all other physicians who expect to be in attendance should arrange for their quarters as soon as possible, as this will assure to them satisfactory accommodation and avoid disappointment at the last moment.

AMERICAN MEDICAL ASSOCIATION, Hotel Dennis.
American Academy of Medicine, Hotel Shelburne.

SECTION HEADQUARTERS.

Section on Practice of Medicine, Hotel Traymore.
Section on Surgery and Anatomy, Hotel Windsor.
Section on Obstetrics and Diseases of Women, Hotel Garden.
Section on Materia Medica and Therapeutics, Hotel Luray.
Section on Neurology and Medical Jurisprudence, Hotel Brighton.
Section on Ophthalmology, Hotel Haddon Hall.
Section on Laryngology and Otology, Hotel Seaside.
Section on Physiology and Dietetics, Hotel Ilsesworth.
Section on Diseases of Children, Hotel St. Charles.
Section on Cutaneous Diseases, Hotel Rudolph.
Section on Stomatology, Hotel Senate.
Section on State Medicine, Hotel Pennhurst.

The Official Program.—In order to avoid misunderstandings and to protect the interests of advertisers, attention is called to the fact that there is but one official program. This program is copyrighted by the Board of Trustees and contains no advertising matter.

Miscellany.

Vomiting Coffee-Ground Masses After Gynecologic and Obstetric Operations.—Beuttner has described (*Corr. f. Schweizer Aerzte*, 1899, 18) seven patients in whom a coffee-ground substance was vomited during or soon after the operation, with subsequent severe anemia. There was no stomach nor heart disease in any case, and the technique could not be incriminated. One came to the autopsy and numerous hemorrhagic erosions were found in the stomach. He suggests that the coffee-ground substance may have been produced by the venous congestion caused by the narcosis, and the action of an exceptional amount of hydrochloric acid in the stomach.

Deprival of Salt in Treatment of Epilepsy.—THE JOURNAL has called attention to Richet's recent announcement that the bromids can be rendered doubly effective by depriving the patients of salt in their food. Roux confirms this statement and asserts that the simplest manner of depriving the food of salt is to place subjects on a milk diet. He found very small amounts of bromids effective in arresting and preventing seizures when combined with a milk diet, while if salt were added to the milk the seizures appeared in one of his four patients.

Sectional Limits of Cutaneous Anesthesia on the Head.—F. V. Soelder found cutaneous anesthesia limited to certain regions on the head, identical and constant in six cases of syringomyelia. They were not found in any of the cases of hysteria he examined, and consequently can assist in the differentiation, as he announces in *Jahrb. f. Psych.*, xviii, 3. The sectional limits on the trunk and extremities are the same with lesions of either spinal cord or roots, but this coincidence does not occur in the localizations on the head.

Vital Statistics of Havana, Cuba, March, 1900.—The report of the chief sanitary officer, Major W. C. Gorgas, surgeon, U. S. A., shows 605 deaths in an estimated population of 220,000. In the list of deaths are 96 from tuberculosis; 48 from pneumonia, 45 from bronchitis, and 23 from la grippe; 40 from enteritis and 4 from typhoid fever; 23 from meningitis; 24 from malaria, 9 from pernicious malarial fever and 12 from cirrhosis of the liver; 45 from arterial sclerosis; 16 from tetanus; 2 from leprosy; 2 from beri-beri and 4 from yellow fever. Eleven new cases of the last mentioned disease occurred during the month. The births number 553, of which 225 were illegitimate; marriages 142. The average number of gallons of electrozone applied daily for the disinfection of catch basins, sewers, streets, urinals and houses was 9715. Nothing is said as to the efficiency of the electrozone.

Boards of Health in Porto Rico and Cuba.—The past week has brought to the U. S. War Department information of an order for the establishment of a board of health in every municipality of the island of Porto Rico and of a board for the city of Santiago, Cuba. General Orders No. 66, Headquarters, Department of Porto Rico, March 29, 1900, publishes the requirements called for by the Porto Rico Department Commander, General George W. Davis, U. S. Volunteers, on the recommendation of the Superior Board of Health of the island, of which Major J. Van R. Hoff, chief surgeon of the department is president. The order provides for a board of health in each municipality, to be constituted as follows: The alcalde, a municipal physician, the president of the school board and the president of the board of charities, all of whom must be residents of the municipality in which they are to serve. Where there is more than one municipal physician, the other members will elect one of these to membership on the health board. The alcalde will be president, the municipal physician health officer and the board will elect a secretary from its other members. One regular meeting will be held each month and special ones on the call of the president or any two members. At special meetings only the business designated in the call will be transacted. Three members will constitute a quorum. An estimate will be placed on the municipal budget each year to cover the expenses of the board. The municipal judge, on or before the fifth day of each month, will furnish the board of health with a report of the vital statistics of the municipality for the month immediately preceding. On the same day General Orders No. 67 gave further information on matters relating to public health. These require each municipality in Porto Rico to provide in its annual budget for the payment of municipal physicians and practicantes, for medical attendance on the poor and for medicines for the same class, and money appropriated for medical attendance and for medicines is to be used for no other purpose. Each municipality shall have at least one municipal physician. If the population exceeds 10,000, there shall be not less than two municipal physicans, and for every 6000 or major fraction thereof above this number there shall be an additional municipal physician. When there is more than one municipal physician the territory will be divided among them as equally as possible, taking into consideration both population and accessibility. Remote and inaccessible barrios must be provided with resident physicians or practicantes. Whenever a barrio is not so provided it will petition the municipal council, and if without result, then the Superior Board of Health, stating in the petition the population of the barrio, the time required for the nearest physician to reach the central and remote portions of the barrio and the number of poor who can not pay for medical aid. The board will, if it deems it necessary, appoint a physician or practicante who will be paid from the municipal treasury. These physicians or practicantes must attend all calls made by the sick poor in their respective districts. All physicians, practicantes, dentists, pharmacists or nurses holding public positions must be licentiates of the Superior Board of Health.

The commanding officer of the Department of Santiago and Porto Principe, Cuba, on March 30, provided for a board of health for the city and district of Santiago, to consist of the chief surgeon, president ex-officio; the director of the civil hospital, vice-president ex-officio; the sanitary inspector; the surgeon of the Marine-Hospital Service and five resident physicians. The Board will elect one of its members as secretary, who will receive $75 a month, the other members serving without pay. The duties of the Board are to advise in all sanitary matters in the city and district, to recommend all measures deemed necessary for the public health and to collect and publish complete vital statistics. All cases of contagious or infectious diseases or diseases suspected to be such are to be reported to the president of the Board, who will immediately notify at least three of the members to examine and decide the

nature of each case so reported. The opinion of the examining members will be expressed in writing over their signatures and handed to the president of the Board. All measures of isolation and disinfection deemed necessary by the Board will be carried out through the Sanitary Department.

Peculiar Sites for Epitheliomas.—A curious bit of medical geography is reported in the *Indian Medical Gazette* for March. Dr. Neve, of the Kashmir Mission Hospital, finds that in Kashmir, epithelioma, instead of affecting the neighborhood of mucous surfaces, has its usual seat on the skin of the abdomen and thighs. It is so common that the name Kangriburn has been given to the lesion, which is a squamous-celled epithelioma of the skin. The cause of it is evident: instead of dressing for warmth every Kashmir man, woman and child carries, during the severe winter and indeed for a great part of the year, a sort of portable stove or charcoal brazier under the single garment next the skin. Slight burns from this source frequently occur and there must be a more or less constant irritation, actually producing a peculiar mottled appearance in many. The frequency of the disease may be estimated when he reports operating on 20 patients in two months, not counting several inoperable ones. This condition is of interest as a medical curiosity, especially when its peculiar cause is taken into account.

Diagnosis and Treatment of Hepatic Abscess.—It must be admitted that at the present day the diagnosis of hepatic abscess remains in a quite unsettled condition. According to Loomis, with a correct history of the case the diagnosis is easy, while DaCosta, on the other hand, regards the symptoms as being obscure, and in many cases the diagnosis a difficult matter. The diseases with which hepatic abscess has most frequently been confused are: malarial fever, typhoid fever, cancer, impacted gall-stone, hydatid cyst and actinomycosis. The etiologic factors which have heretofore been regarded as most conducive in the production of abscess of the liver are: history of amebic dysentery, traumatism, embolism from pyemic foci, malarial fever, gall-stone, rectal abscess, bone disease, and excessive use of alcohol in warm countries. One of the most frequent causes seems to have been overlooked, namely appendicitis. The disease is rare in children. The symptoms vary, according to different writers on the subject. Osler states that in the tropics the disease may remain latent for long periods of time. The most common symptoms and physical signs set aside as being characteristic of this condition are: intermittent fever, night sweats, irregular chills, slight icteroid—muddy—condition of the skin, diarrhea, vomiting, throbbing in the right lobe of the liver referred to the shoulder, pain, and a dragging sensation over the right hypochondriac region. Vierordt states that when the abscess is parietal and involves the peritoneum, there is great tenderness, but when deeply seated there is none. As to the physical signs there appears to be a diversity of opinion. The following have been recognized: enlargement of the liver, mostly in an upward direction, especially noted in the dorsal region of the chest, pain on palpation over the hypochondrium, bulging of the right hypochondrium, with fluctuation or edema, pulsation of the liver, a peritoneal friction, and lastly presence of pus as told by the aspirating needle. All writers agree that the enlargement of liver extends upward and posteriorly. Jackson, after a study of 17 cases of hepatic abscess, regarded the following as the most frequent signs and symptoms: presence of a tumor, fever, chills, leucocytosis, and slow pulse. The latter sign he regards as being quite characteristic. The less important symptoms he considers as pain, tenderness, vomiting, jaundice, and enlarged spleen. Johnston and Fontain enumerate the principal signs and symptoms as follows: pain, indigestion, nausea, intestinal disturbances, irregular fever, jaundice and enlargement of the liver. Malbot, whose experience has been great (*Archives Gén. de Med.*, August, September and October, 1899), regards pain as the most important symptom. Cyr endeavors to bring order out of chaos by describing the symptoms and signs with reference to the position of the abscess, and this seems the most logical. He believes that when the abscess is on the convex surface of the liver, there is pain radiating toward the shoulder, but no jaundice. When it is large and deeply situated, jaundice is present. If the abscess occupies the under surface of the liver, thoracic symptoms will be absent, but gastric ones, especially uncontrollable vomiting, will occur and the pain will radiate toward the right groin. Loomis had previously recognized this phase of the question and stated that when the abscess occupied the posterior portion of the right lobe of the liver the organ would be pushed downward and could be felt below the free margin of the ribs. Jaundice is said to occur when there are multiple abscesses present. Osler describes the liver dulness as being normal in the sternal and parasternal line, but in the mid-axillary region it may reach as high as the fifth rib, and posteriorly as high as the angle of the scapula. Malbot (*The Lancet*, February 24) has seen 222 cases of hepatic suppuration, and regards pain as the most important symptom. This pain was said to be sharp in character, as if something was being torn, and was always brought on by muscular effort, or by succussion, and radiated toward the right shoulder, pit of the stomach, lower part of the abdomen or right iliac fossa, according to the location of the abscess. He has never met with the peritoneal friction, nor has he seen a case complicated by jaundice. The pus in abscess of the liver is usually chocolate in color. The following micro-organisms have been found: ameba coli—most common—colon bacillus, staphylococcus and streptococcus. The diplococcus of Fränkel was found in a case reported by Hermes. Flexner found ameba coli in the sputum as well as crystals supposed to be bilirubin. Loison found a mixture of the colon bacillus and a diplococcus in one case. Reviewing the recent cases of hepatic abscess reported, together with the etiologic factors, the following are noted: Slaughter (1896) collected the history of 27 cases of hepatic abscess occurring in children, and Gassicourt, in 1899, reported an additional one. Rouis (1896) of Algiers collected 250 cases, only 1 in a child. In these cases 9 were supposed to have resulted from injury. Hermes (1896) reported 4 cases of hepatic abscess, one of which resulted from appendicitis, a condition said to be prone to produce suppuration in the right lobe of the liver; one resulted from gall-stone and another from perityphlitis. Of two reported by Flexner (1897), no lesion of the bowel could be found in one instance, while in the other the lesion of the bowel probably followed the disease of the liver. Rendu (1898) reported 2 cases following dysentery, and in the same year Wilson reported 3 due to the same cause. In 1899 Dieulafoy reported the case of a man, 34 years of age, who suffered from slight jaundice, and in whom hepatic abscess was found. Deaver (1899) reported a case which occurred in a woman 24 years of age, which had produced a large tumor but without marked symptoms; there was no history of dysentery nor malaria. In 1899 Jackson analyzed 17 cases of hepatic abscess: in 10 instances the disease probably originated from appendicitis, 2 were from amebic dysentery, 2 accidental, and 3 of unknown origin. Marshall, in 1899, reported a case due to amebic dysentery. He points out the danger of recurrence of those cases should the person reside in a tropical country. In 5 cases reported by Grant (1899), 1 probably arose from disease of the small intestines or colon, 1 from typhoid fever, in 1 the infection could not be traced, and 2 were from appendicitis. In the same year Eisendrath reported a case probably having its seat in the large intestine. In this instance the disease was multiple, affected the left lobe and produced no clinical symptoms.

In the treatment, the following named believe in incision and drainage: Rendu, Roger, Loison, Dieulafoy, Jackson, Marshall, Grant, Deaver and Cadet de Gassicourt. Hadra advises costotomy. Grant advises aspiration followed by incision, flushing and drainage. He believes that more than 60 per cent. of abscesses of this region are accessible through the diaphragm, by excising a part of the eighth and ninth ribs, and if possible stitching the liver wound to the diaphragmatic wound to prevent reinfection. He believes that the prognosis will be favorable in 75 per cent. of such cases. Hadra advises that the abscess cavity be not flushed, owing to the danger of reinfection. Fonan states that in cases of migrating abscess of the liver the pus shows a tendency to follow the anterior abdominal wall, and that the incision should be made so that it will hug the lower limit of the thorax, to promote drainage. In one case reported by Jackson, three attempts were made to aspirate, but proved ineffectual.

Queries and Minor Notes.

PRACTICE IN NEW MEXICO.

OWOSSO, ILL., April 28, 1900.

To the Editor.—Please advise me as to the laws governing medical practice in New Mexico. J. O. P.

ANSWER:—If the terms and regulations for practice in New Mexico are still those cited in the Illinois State Board of Health report for 1898, they are simply the presentation of a satisfactory diploma, or examination if a non-graduate. The diploma must be from a school that requires a sufficient preliminary examination and has a four years' course. One from another school would not be sufficient and examination would be required.

PRACTICE IN TEXAS.

WHEAT, TENN., April 23, 1900.

To the Editor.—Will you inform me regarding the medical laws of Texas? I am a graduate of Vanderbilt University, and wish to know whether it will be necessary for me to take a state examination. R. L. G.

ANSWER:—The medical laws of Texas, we understand, are rather lax. We are informed by the *Texas Medical Journal* (November, 1899) that a diploma from an accredited medical college chartered by the state where located will make the holder a legally qualified physician, provided the diploma is registered in the court records of the district in which the holder is practicing.

CONCERNING SODIUM CHLORID.

KANSAS CITY, MO., Apri 25, 1900.

To the Editor:—It has lately come to my notice, through a patient, that sodium chlorid is an "antifat" agent, if taken in teaspoonful doses before meals. I would like to know whether sodium chlorid is recognized as possessing this power of reducing tissue. How does it do it? Is it hurtful to the human economy? R. S. B.

ANSWER:—We are not informed as to the specific effect of sodium chlorid as an antifat agent, though its use has been recommended to increase metabolism, and carry off waste products. Certain mineral waters, like Kissingen and Hamburg, are recommended as a good treatment for obesity. The action of the sodium chlorid would be favoring tissue change and elimination.

ADDRESSES OF SECRETARIES, ETC.

EASTON, PA., April 28, 1900.

To the Editor:—Will you kindly give me the names and addresses of the secretaries of the state boards of medical examination in the following: Kentucky, Rhode Island, Ohio, Louisiana, Maryland, Massachusetts, District of Columbia, Idaho, Minnesota, South Dakota, Wyoming? W. H. D.

ANSWER:—The names and addresses desired are, or were: Kentucky, J. N. McCormac, Bowling Green, secretary of the State Board of Health; Rhode Island, J. T. Swartz, Providence, secretary of the State Board of Health; Louisiana, T. S. Kennedy, New Orleans, president of the State Board of Medical Examiners; Maryland, J. McP. Scott, Hagerstown; Massachusetts, Edward Harvey, Boston, secretary of the State Board of Registration; District of Columbia, Geo. C. Ober, Washington; Idaho, C. L. Sweets, Boise; Minnesota, J. B. Brimhall, St. Paul; South Dakota, H. Files, Sioux Falls; Wyoming (data not at hand). These addresses are taken from the Report of the Illinois State Board of Health and there may have been some changes. Ohio has just passed a new law and we are not informed as to the appointments under it.

PRACTICE IN RHODE ISLAND.

NEW YORK CITY, April 23, 1900.

To the Editor:—Will you inform me regarding the medical laws of Rhode Island? F. A. B.

ANSWER:—Rhode Island requires a diploma from a reputable medical college requiring a four years' course, endorsed by the State Board of Health, or an examination.

BOOKS AND PAMPHLETS RECEIVED.

Acknowledgement of all books received will be made in this column, and this will be deemed by us a full equivalent to those sending them. A selection from these volumes will be made for review as dictated by their merits, or in the interests of our readers.

BOOKS.

INJURIES TO THE EYE IN THEIR MEDICO-LEGAL ASPECT. By S. Duplay, M. D. Professor in the Faculty of Medicine, University of Lille, France, etc. Translated from the Original by Alfred Rheostheimer, Jr., M. D., Philadelphia. Revised and Edited by Charles A. Oliver, A.M. M.D. Attending Surgeon to the Wills Eye Hospital; Ophthalmic Surgeon to the Philadelphia Hospital; Member of the American and French Ophthalmological Societies, etc. With an Adaptation of the Medico-Legal Chapter to the Laws of the United States of America, by Charles Sinkler, Esq., Member of the Philadelphia Bar. 5⅝ by 7⅞ inches. Pp. 161. Cloth, $1 net. Philadelphia: The F. A. Davis Co.

OPERATIVE SURGERY OF MALIGNANT DISEASE. By Henry T. Butlin, F.R.C.S., D.C.L., Surgeon to St. Bartholomew's Hospital. With the Co-operation of James Berry (The Typhoid), W. Bruce Clarke (The Kidney), Alban Doran (The Ovary and Uterus), Percy Furnivall (The Stomach, Intestine and Rectum), Walter Jessop (The Breast), H. J. Waring (The Liver and Gall-Bladder). Second Edition. Pp. 426. Price, $4.50. Philadelphia: P. Blakiston's Son & Co. 1900.

CANCER OF THE STOMACH AND DUODENUM AND ITS CONSEQUENCES. By Samuel Fenwick, M.D., F.R.C.P., Consulting Physician to the London Hospital and W. Soltau Fenwick, M.D., M.R.C.P., Senior Physician to the London Temperance Hospital. Cloth. Pp. 392. $3.50. Philadelphia: P. Blakiston's Son & Co. 1900.

STUDENT'S HANDBOOK OF SURGERY OF ALIMENTARY CANAL. An Enlarged and Amended Edition of the Author's Treatise on the Same Subject. By A. Ernest Mayland, M.B., B.S., Surgeon to the Victoria Infirmary, Glasgow. Cloth. Pp. 510. Price $3. Philadelphia: P. Blakiston's Son & Co. 1900.

ANATOMY OF THE BRAIN. A Text-Book for Medical Students. By Richard H. Whitehead, M.D. Professor of Anatomy in the University of North Carolina. Illustrated with Forty-one Engravings. 6½ by 9½ Inches. Pp. 96. Extra Vellum Cloth, $1 net. Philadelphia: The F. A. Davis Co.

PARALYTIC DEFORMITIES OF LOWER EXTREMITIES. The principles of their Surgical Treatment. By E. Noble Smith, F.R.C.S., L.R.C.P., etc., Senior Surgeon to the City Orthopedic Hospital, and Surgeon to All Saint's Children's Hospital, London. With 51 Illustrations. Cloth. Pp. 99. Price, $5. London: Smith, Elder & Co. 1900.

PUBLIC HEALTH PAPERS AND REPORTS. Volume 25 Presented at the Twenty-Seventh Annual Meeting of the American Public Health Association, Minneapolis, Minn., October 31 and November 1, 2 and 3. 1899. Columbus, Ohio. Berling Printing Co. 1900.

TRANSACTIONS OF MICHIGAN STATE MEDICAL SOCIETY. For the Year 1899. Vol. 23. Cloth. Pp. 481. Grand Rapids, Mich.: Published by the Society. 1899.

TRANSACTIONS OF MEDICAL ASSOCIATION OF STATE OF MISSOURI. Forty-second Annual Session, May 16, 17, 18, 1899. Cloth. Pp. 387. Kansas City, Mo.: Burd and Fletcher Printing Co. 1899.

TRANSACTIONS OF IOWA STATE MEDICAL SOCIETY. Vol. 17. Forty-eighth Annual Session. 1899. Cloth. Pp. 420. Waterloo, Iowa: H. G. Middleditch. 1899.

TRANSACTIONS OF NEW HAMPSHIRE MEDICAL SOCIETY. One Hundred and Eighth Anniversary, May 25 and 26, 1899. Cloth. Pp. 308. Concord, N. H.: Ira C. Evans. 1899.

TRANSACTIONS OF COLORADO STATE MEDICAL SOCIETY. Twenty-eighth and Twenty-ninth Annual Conventions. By-laws and List of Members. Cloth. Pp. 515. Denver: Published for the Society. 1899.

TRANSACTIONS OF SIXTY-SIXTH ANNUAL SESSION OF THE MEDICAL SOCIETY OF STATE OF TENNESSEE. 1899. Cloth. Pp. 325. Nashville: John Rundle & Sons. 1899.

TRANSACTIONS OF MEDICAL ASSOCIATION OF GEORGIA. Fiftieth Annual Session. 1899. Cloth. Pp. 575. Atlanta, Ga.: Published by the Association. 1899.

PROCEEDINGS OF KANSAS MEDICAL SOCIETY. Thirty-third Annual Meeting. Topeka, Kans., May 3, 4, and 5, 1899. Cloth. Pp. 192. Topeka: A. D. Bauer Printing Co. 1899.

REPRINTS, ETC.

ANNUAL REPORT OF FRANK J. IVES, Surgeon U. S. Volunteers. Chief Surgeon, Department of Matanzas and Santa Clara. Paper. Pp. 30. 1899.

CONTRIBUTION TO HISTOGENESIS OF MELANOSARCOMA OF THE SKIN. By Alfred Schalek, Chicago. Reprinted from Jour. of Cut. and Genito-Urinary Dis.

GYNECOLOGIC COMPLICATIONS OF NEURASTHENIA FROM A NEUROLOGIC STANDPOINT. By John Punton, Kansas City, Mo. Reprinted from Western Medical Review.

A MEDICO-RELIGIOUS CHARITY—THE GUILD OF MERCY. By W. Thornton Parker. Westboro, Mass. Reprinted from Atlanta Jour.-Record of Medicine.

REPORT OF COMMISSION ON CHICAGO RIVER. Submitted December 11, 1899.

SOME POINTS IN DIAGNOSIS OF TRAUMATIC INJURIES OF CENTRAL NERVOUS SYSTEM. By J. T. Eskridge, M.D., Denver, Colo. Reprinted from THE JOURNAL.

STRICTURE OF ESOPHAGUS AND ELECTROLYSIS BY NEW ESOPHAGEAL ELECTRODE. By Charles D. Aaron, Detroit, Mich. Reprinted from Phys. and Surg.

TENTH ANNUAL REPORT OF ST. MARY'S HOSPITAL. Rochester, Minn. Conducted by Sisters of St Francis. Rochester, Minn.: Daily Bulletin Print 1900.

TRANSACTIONS OF PHILADELPHIA COUNTY MEDICAL SOCIETY for January, February, March, April, May, September, October, November, and December, 1899. Philadelphia.

TWENTY-SECOND ANNUAL REPORT OF THE PRESBYTERIAN EYE, EAR AND THROAT CHARITY HOSPITAL OF BALTIMORE. Baltimore: J. S. Bridges & Co. 1900.

The Public Service.

ARMY CHANGES.

Movements of Army Medical Officers under orders from the Adjutant General's Office, Washington, D. C., April 21 to 27, 1900, inclusive:

Calvin DeWitt, lieutenant colonel, deputy surgeon-general, U. S. Army, leave of absence on account of sickness.

William W. Quinton, captain and asst.-surgeon, U. S. Army, relieved from further duty in the division of Cuba to proceed to New York City, N. Y., and report by telegraph to the adjutant-general of the Army for further orders.

Najeeb M. Saleeby, acting asst.-surgeon, leave of absence granted.

Charles F. Sanborn, acting asst.-surgeon, previous orders, directing him to proceed from Willard, N. Y., to the Department of California, revoked.

Alfred A. Woodhull, lieutenant-colonel and deputy surgeon-general, U. S. Army, to report to the surgeon-general of the Army for duty in his office.

NAVY CHANGES.

Changes in the Medical Corps of the U. S. Navy for the week ending April 21, 1900.

Medical Inspector G. E. H. Harmon, detached from the *Baltimore* and ordered to the *Oregon*.

Surgeon F. B. Stephenson, detached from the *Oregon* and ordered to the *Baltimore*.

(Changes by Cable from Asiatic Station.)

Passed Assistant Surgeon L. Morris to the *Baltimore*.

Passed Assistant Surgeon S. G. Evans, orders of April 13 modified: ordered to proceed home, when detached from the *Marblehead*, and to be ready for sea duty.

MARINE-HOSPITAL CHANGES.

Official list of changes of station and duties of commissioned and non-commissioned officers of the U. S. Marine-Hospital Service for the seven days ending April 19, 1900

Surgeon A. H. Glennan, to rejoin station at New Orleans, La., April 18, 1900.

Surgeon W. P. McIntosh, detailed to represent the Service at the meeting of the Medical Association of the State of Alabama, to be held at Montgomery, Ala., April 17-21. To proceed to Tarpoon Springs, Fla., for special temporary duty.

P. A. Surgeon G. M. Guiteras, bureau order of March 5, 1900, relieving P. A. Surgeon Guiteras from duty at Matanzas, Cuba, revoked.

Asst.-Surgeon V. G. Heiser, detailed as delegate to the Congress "for the struggle against Tuberculosis" to be held at Naples, Italy, April 23-28, 1900.

Asst.-Surgeon D. E. Trotter, Bureau order of March 5, 1900, detailing Asst.-Surgeon Trotter for duty as quarantine officer at Matanzas, Cuba, revoked and directed to proceed to Cienfuegos, Cuba, as quarantine officer.

Acting Asst.-Surgeon J. C. Ballard, granted leave of absence for 51 days from May 1, 1900.

Acting Asst.-Surgeon W. Havelburg, granted leave of absence for thirty days from May 10, 1900.

Hospital Steward G. C. Allen, granted leave of absence for 27 days from April 19, 1900.

Hospital Steward G. W. Iltis, to proceed to Cleveland, Ohio, and report to medical officer in command for duty and assignment to quarters.

BOARD CONVENED.

Board convened to meet at Washington, D. C., April 19, 1900, for the physical examination of candidates for appointment as Second Assistant Engineer in the U. S. Revenue Cutter Service.

Detailed for the Board.—Surgeon, P. M. Carrington, Chairman; Asst.-Surgeon L. D. Fricks and Asst.-Surgeon W. C. Billings, Recorder.

APPOINTMENT.

George W. Iltis, of Minnesota, appointed Junior Hospital Steward.

HEALTH REPORTS.

The following cases of smallpox, yellow fever, cholera and plague, have been reported to the Surgeon General, U. S. Marine-Hospital Service, during the week ended April 28, 1900.

SMALLPOX—UNITED STATES.

Alabama: Mobile, April 14-21, 12 cases.
District of Columbia: Washington, April 14-21, 2 cases.
Florida: Jacksonville, April 14-21, 1 case.
Illinois: Aurora, April 1-7, 1 case; Chicago, April 14-21, 4 cases.
Indiana: Evansville, April 14-21, 5 cases; Indianapolis, April 1-21, 8 cases.
Kansas: Wichita, April 14-21, 11 cases; Thirty-three towns and counties. March 1-31, 456 cases, 5 deaths.
Kentucky: Covington, April 14-21, 7 cases; Lexington, April 14-21, 2 cases.
Louisiana: New Orleans, April 14-21, 75 cases, 19 deaths.
Maine: Portland, April 14-21, 1 death.
Michigan: Detroit, April 14-21, 1 case.
Nebraska: Omaha, April 14-21, 2 cases.
Ohio: Cleveland, April 14-21, 15 cases.
Pennsylvania: Philadelphia, April 21, 1 case; Pittsburg, April 14-21, 2 cases.
South Carolina: Greenville, April 13-20, 3 cases.
Utah: Salt Lake City, April 14-21, 3 cases.
Washington: Spokane, April 14-21, 3 cases.
Wisconsin: April 14, 1 case.

SMALLPOX—FOREIGN.

Austria: Prague, March 24-31, 5 cases.
Belgium: Ghent, April 1-7, 2 deaths.
Egypt: Cairo, March 18 to April 1, 16 deaths.
England: Liverpool, April 1-7, 8 cases, 2 deaths; London, April 1-7, 2 cases; Southampton, April 1-7, 1 case.
France: Paris, April 1-7, 2 deaths; Gibraltar, April 1-8, 4 cases, 1 death.
Greece: Athens, April 1-7, 4 cases, 2 deaths.
India: Bombay, March 13-20, 163 deaths; Bombay, March 20-27, 138 deaths; Calcutta, Feb. 4 to March 3, 21 deaths; Kurrachee, March 11-25, 24 cases, 12 deaths.
Mexico: Chihuahua, April 1-14, 2 deaths; Vera Cruz, April 7-14, 6 deaths.
Russia: Odessa, March 24 to April 7, 9 cases, 3 deaths; St. Petersburg, March 18-24, 30 cases, 3 deaths; Warsaw, March 18-31, 2 deaths.
Spain: Madrid, March 24-31, 8 deaths.
Straits Settlements: Singapore, March 3-10, 3 deaths.

YELLOW FEVER.

Costa Rica: Limon, April 20, 1 case.
Mexico: Vera Cruz, April 7-14, 2 deaths.

CHOLERA.

India: Bombay, March 13-27, 11 deaths; Calcutta, Feb. 24 to March 3, 70 deaths.

PLAGUE—INSULAR POSSESSIONS, U. S.

Hawaii: Honolulu, March 26 to April 2, 3 cases, 3 deaths: April 9, 1 case.

PLAGUE—FOREIGN.

Brazil: Rio de Janeiro, April 20, 6 cases, 6 deaths.
India: Bombay, March 13-27, 1428 deaths; Calcutta, Feb. 24 to March 3, 411 deaths; Kurrachee, March 11-31, 292 cases, 223 deaths.

Anderson, R. L., from Charleston to Fort Mill, S. C.
Appleton, H. L., from Cedar Bluff to Center, Ala.
Austin, J. H., from Kansas City, Mo., to El Paso, Texas.
Arnold, J. P., from Philadelphia, Pa., to Clinton and Monmouth Streets, Trenton, N J.
Bennett, P. R., from Daytona, Fla., to Urbana, Ohio.
Brown, Leroy, from St Paul Park, to Endicott Arcade, St Paul, Minn.
Bell, J R, from Charleston to Due West, S C
Benepe, J. L., from Imperial Hotel to Willoughby Building, Indianapolis, Ind.
Boyd, S. J., to 413 Washington Boul., Chicago, Ill
Bowser, O. B. H., from Washington, D.C., to 513 N. Adams Street, Richmond, Va.
Colson, A. C., from Manassas to Quince, Ga.
Corry, F. M., from Milwaukee to Fennimore, Wis
Crockett, E. N., from Lone Creek to 348 Main St., Portland, Oregon.
Cooper, A. R., from 3121 Dearborn Street to 2970 State Street, Chicago, Ill.
Cannon, J., from Des Moines, Iowa, to 407 Security Building, Chicago, Ill.
Cozard, Henry Irving, from Columbus, to 633 W. Market Street, to Akron, Ohio
Corsant, J. C., from Iowa City to Doryville, Iowa.
Cady, C. C., from Des Moines to Truro, Iowa.
Coulter, W. J., from Toledo, Ohio, to Milverton, Ontario, Canada
Clement C. A., from Danville to Rover, Ark.
Chambers, G. F., from Atlanta, Ga., to Fort Mitchell, Ala.
Dickinson, F., from 70 State to 169 S Clark Street, Chicago, Ill.
Dowdall, W. T., from 3316 Rhodes Avenue, to Rand McNally Building, Chicago Ill
Davis R. B., from Henderson to Henderson, Tenn
Deters, W. A. from Iowa City, Iowa, to Woodstock, Minn.
Elrod, J. O., from Atlanta to Adairsville, Ga.
Eyman, H. C., from Cleveland to Superintendent of State Hospital, Massillon Ohio.
Estopinal, J. A., from St. Bernard to Estopinal, La.
Edwards, J. M., from Chicago, Ill., to West End Hotel, St. Louis, Mo.
Elarbee, G. W., from Atlanta, Ga., to Macon, Fla.
Frank, I., from 1929 Deming Place to Michael Reese Hospital, Chicago, Ill.
Fuller, J. L., from Obion to Gadsden, Tenn.
Fife, J. D., from Proctor, Ind., to Glady, W. Va.
Findley, P. A., from Des Moines, Iowa, to Ozark, Mo.
Fleisher, Rabecca, from 621 No. 16, to 1305 Locust Street, Philadelphia, Pa.
Francis, J. H., from Milwaukee to Medford, Wis.
Grinnell, W. B., from Chicago, Ill., to Wykoff, Minn.
Goggin, R. J., from Suring to Oconto Falls, W's.
Herrick, H. B., from 2228 Euclid Avenue to 2531 Euclid Avenue, Cleveland, Ohio.
Homer, H. C., from Horton, Iowa, to 2301 Indiana Avenue, Chicago, Ill.
Hummel, E. P., from Chicago, Ill., to La Porte City, Iowa.
Hines, C., from 543 3d Street to 692 Front Street, Portland, Or.
Hartley, H. H., from Prairie City, Ore., to Centerville, Wash.
Hinde, J. R., from Chicago to Lewiston, Ill.
Hirschman, L. J., Harper Hospital Detroit, to 420 Underwood ave., Detroit, Mich.
Jones, D. W ., from New Orleans, La., to Port Gibson, Miss.
Jackson, F. K., from Waitsfield, to Mary Fletcher Hospital, Burlington, Vt.,
Kirk, A. B., from Chicago, Ill., to Hibbing, Minn.
Kincaid, G. E., from 2920 Pine to 4533 Labadie, St. Louis, Mo.
Kinsinger, J. B., from St. Joseph, to Mound City, Mo.
Kuchar, V., from Kansas City, Kan., to Yukon, O. T.
Krebs, L. L., from Springfield, to Ha-Ha-Touka, Mo
Little, W. H ., from Kansas City, Mo., to Buhler, Kan.
Lyman, T. P., from 2124 to 2070 Wilcox ave., Chicago, Ill.
Lewis, Le Roy, from Auburn, N. Y., to 90 Warren ave., Chicago, Ill.
Law, S. P., from Bryn Maur, Pa., to H. L. Law, 100 Washington Street, Hartford, Conn.
Lukens, A., from Pelham to 1068 Lexington Avenue, New York City, N. Y.
Lindsey, R. C., from Atlanta, to Irvington, Ga.
Lyon, E. A., from 4658 State street to 534 E. 47th Street, Chicago, Ill.
Morris, J. L., from Chicago, Ill., to Columbus, Ind.
Meis, E. W., from Dyersville to Zwingle, Ia.
McCormick, Olin, from Chicago to Saunemin, Ill.
McClure, C. F., from 1256 to 1106 Lawndale Avenue, Chicago.
Murrell, C. P., from City Hospital to 1322 Market Street, St. Louis, Mo.
McGahan, C. F., from Aiken, S. C., to Bethlehem, N. H.
McKelway, G. I., from 255 S 17th to 114 S. 18th Street, Philadelphia, Pa.
Nead, D. W., from Box 294 to 3222 Spencer Terrace, Philadelphia, Pa.
Perry, J. C., from Port Townsend, Wash., to Manila, P. I.
Pinkerton, B. G., from St. Louis, Mo., to Care British Post Office, Beyrout, Syria.
Painter, F. W, from Bloomfield to Pilot Point, Tex.
Runyon, C., from Chicago, Ill., to 901 W. South A. Elwood, Ind.
Sweet, A. A., from 4839 to 4785 N. Clark Street, Chicago, Ill.
Savre, L., from Indianapolis, Ind., to Lake Mills, Ia.
Sholars, A. R., from New Orleans, La., to Orange, Tex.
Sale, H. M., from Washington to Leverett, Ga.
Sassaman, F. W., from Boone Grove, to Valparaiso, Ind.
Spring, C. K., from 46 Fowler to 1451 Dakin Street, Chicago.
Stevenson, A. F. Jr., from Presbyterian Hospital to 378 Salle Avenue, Chicago, Ill.
Scholtes, T. W., from Chicago, Ill., to Reads Landing, Minn.
St. John, H. H., from St. Louis to La Belle, Mo.
Sheppard, J. E., from 135 Clinton to 108 Pierrepont St., Brooklyn, N. Y.
Strow, R. M., from 422 Sherman to 1819 Cherry Street, Toledo, Ohio.
Sieker, A. W., from Chicago, Ill., to Franklin, Wis.
Thornton, J. W., from Lansing to Ayreshire, Ia.
Twitty, W. S., from Charleston to Kershaw, S. C.
Warnell, J. B., from Strumboy, to Coe, Ga.
Weston, F. R., from Owalaska to La Crosse, Wis.
Wood, G., from 903 W. Monroe to 348 E. 55th Street, Chicago.
Wonnington, F. L., from Ritchey, Mo., to Miami, I. T.
Wilkins, A. E., from Kansas City, Mo,. to Ceres, O .T.